Special Service Tools for

CHRYSLER
IMPERIAL
PLYMOUTH

and Dodge *"Job-Rated"* Trucks

CATALOG C-708

HOW TO USE
THIS CATALOG TO FIND THE SPECIAL TOOL YOU NEED!

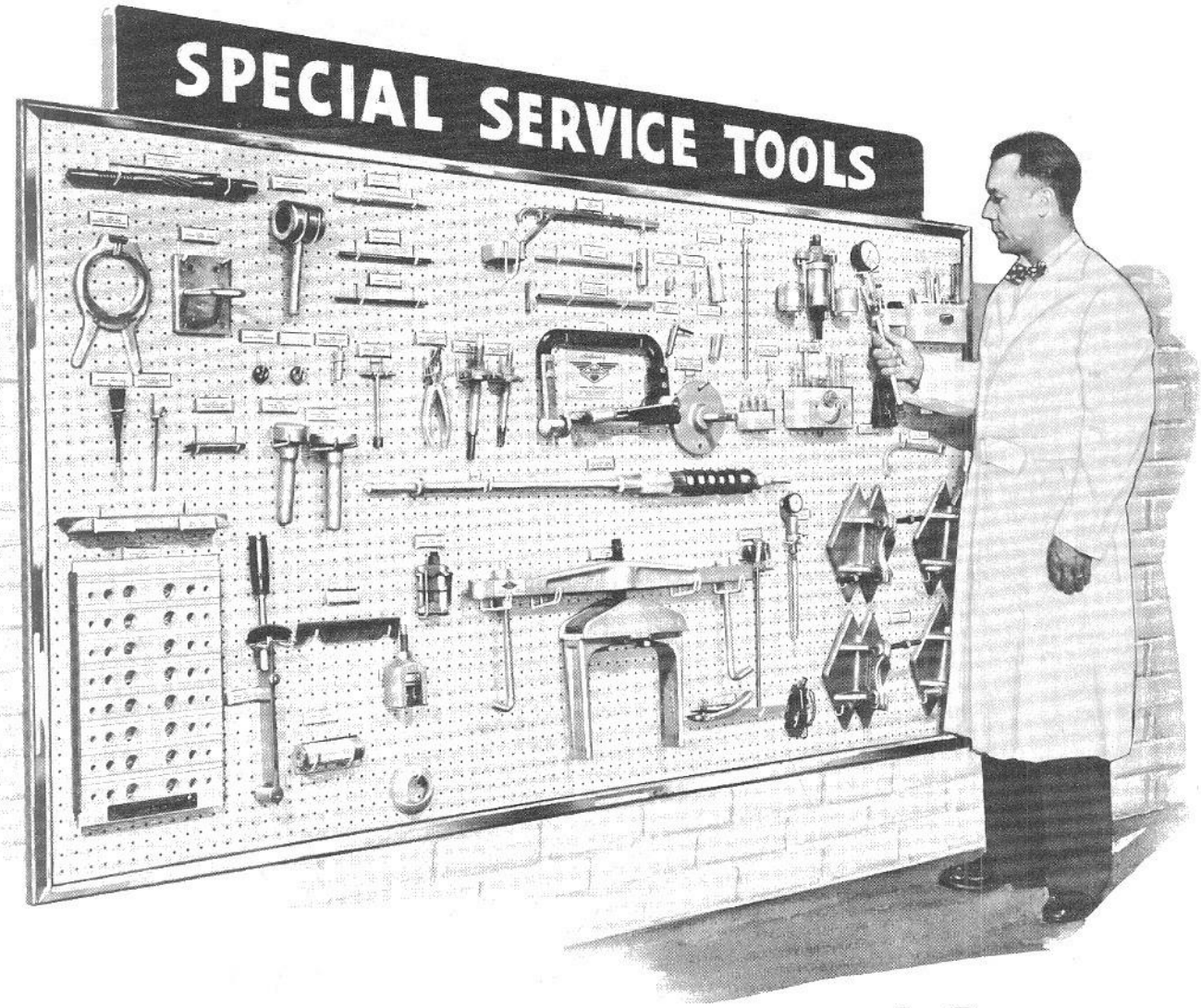
CHECK the quick Reference Index below. It coincides with most car factory service manuals and will indicate the proper section to turn to first. Each page also carries a heading indicating its section. All related tools will be found grouped closely together. A detailed Numerical Index is also included to provide a fast reference when the tool number is known.

QUICK REFERENCE INDEX

SECTION	PAGES
AIR CONDITIONING	7
AXLE REAR	8 to 24
BODY & FENDER	25 to 35
BRAKES	36 to 42
CLUTCH	43 to 45
CONVERTERS (Torque)	46 to 48
COOLING SYSTEM	49 to 52
ELECTRICAL SYSTEM	53 to 58
ENGINE	59 to 84
FLUID DRIVE	85 to 88
FRONT END SUSPENSION	89 to 94
MECHANIC'S HAND TOOLS	95 to 99
SPRINGS & SHOCKS	100 to 101
STEERING (Incl. Power Steering)	102 to 112
TIRES	113 to 114
TRANSFER CASE	116
TRANSMISSION (Overdrive)	115 to 116
TRANSMISSION (Incl. PowerFlite)	117 to 130
UNIVERSAL JOINT	131
MISCELLANEOUS	132 to 137
TOOL DISPLAY BOARDS	138 to 139
SALES TERMS—GUARANTEES	140
NUMERICAL TOOL INDEX	141 to 146
TOOL ORDER FORMS	147 to 160

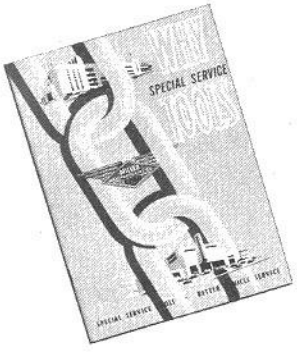
CATALOG 708
Litho in U.S.A.,
March, 1956
20M U. S. 3M X
3M CX S.H.&T.
Miller Mfg. Co.,
U.S.A. and Canada

MILLER
MANUFACTURING CO.
5919 TIREMAN AVENUE
DETROIT 4, MICHIGAN



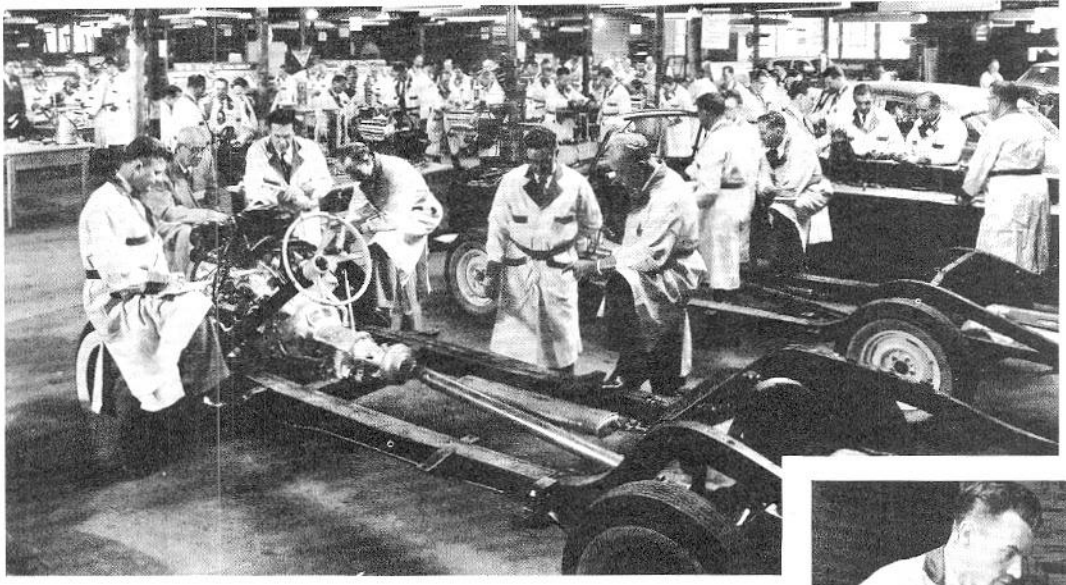
Why Special Service Tools?

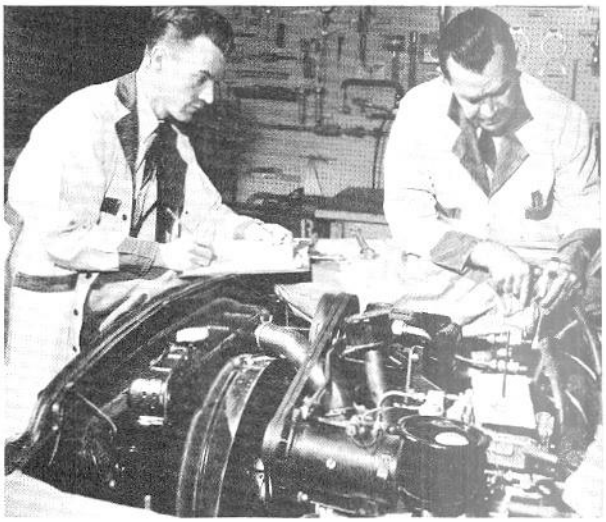
WITHOUT special service tools, many of today's commonplace service operations would not be practical to perform economically in most dealer service shops. Such tools are of low-cost practical designs that allow a semi-skilled mechanic to accurately duplicate original manufacturing and assembly methods. These tools are developed in co-operation with the vehicle manufacturer's design and service engineers as an important aid for the dealer who must render dependable service for every unit of the car or truck. Thus, special service tools help the dealer's shop turn out first quality service work at a fair price to his customers and earn the shop a satisfactory profit as well. Such special tools are usually provided by the dealership to supplement each mechanic's personal hand tools. These tools are effectively used by car dealers—fleet owners—independent service shops—mechanics—parts jobbers—and even some car or truck owners.



LET US MAIL YOU THIS FREE BOOKLET! IT TAKES ONLY 12 MINUTES TO READ!

READ how special service tools differ from standard tools. Learn, too, how special tools are originated why they are made by a specialty manufacturer and why they are not sold by the same methods used to merchandise mechanic's hand tools. This booklet tells the "behind the scenes" story of special tools that you'll find informative and interesting. It is yours for the asking.





CAR AND TRUCK MAKERS USE MILLER TOOLS TO ESTABLISH LATEST SERVICE METHODS— TO TEACH FACTORY SERVICE REPRESENTATIVES

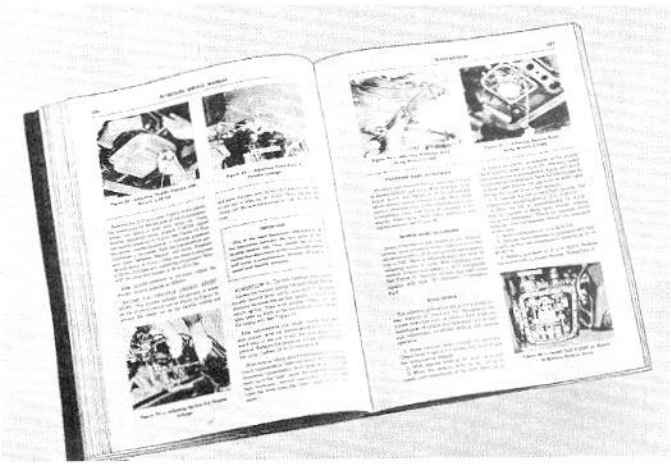
Practical field maintenance and service methods for complicated automotive mechanisms often depend almost completely upon fool-proof special tools and gauges. These often become the means by which hundreds of factory service representatives are taught simple low-cost repair methods that would otherwise be economically impractical. Special tools also allow uniform proven repair methods at uniform recommended time schedules.

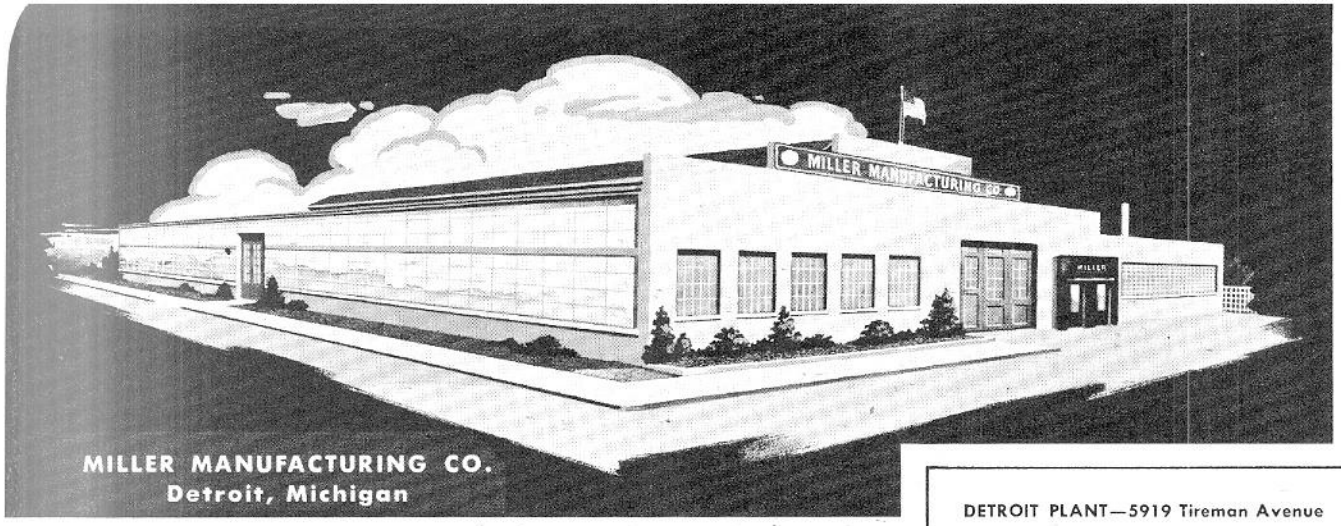
FACTORY FIELD SERVICE REPRESENTATIVES USE SAME TOOLS TO TEACH DEALER'S SERVICEMEN LATEST SERVICE METHODS

Availability of properly designed special tools makes it possible for factory field men to quickly and adequately hold service educational clinics with dealer service personnel in all territories almost simultaneously. Special tools help assure quality and dependable service by all dealers.

OFFICIAL FACTORY SERVICE MANUALS PICTURE MILLER TOOLS IN RECOMMENDED SERVICE PROCEDURES

When you invest in Miller tools you can be sure that you are buying the right tool to do the job as recommended by your factory design and service engineers. All Miller tools are guaranteed to satisfactorily perform the job for which they were intended. Use your factory service manual to help select the Miller special service tools that your shop needs.





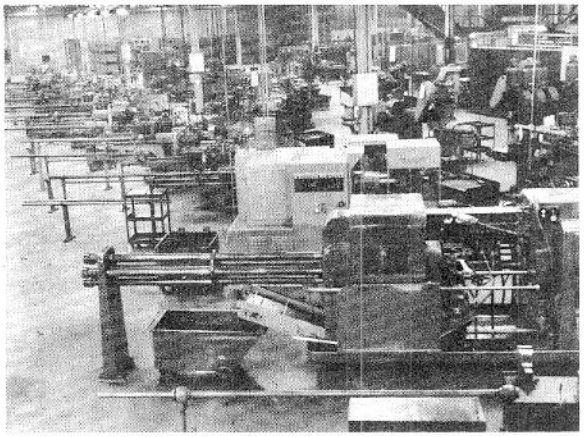
MILLER MANUFACTURING CO.
Detroit, Michigan

DETROIT PLANT—5919 Tireman Avenue

Here Miller concentrates its administrative and engineering staffs, together with its overseas and domestic shipping facilities.

MODERN ENGINEERING—MANUFACTURING AND SHIPPING FACILITIES KEEP MILLER SPECIAL TOOLS ALWAYS COMPETITIVE!

Miller facilities are constantly being supplemented with the latest improvements in automatic production equipment and methods. Compare Miller tool designs—prices and service with competition—there is no question as to the extra benefits they bring to Miller customers. More than 80% of Miller's annual sales volume is from tools and products designed and manufactured within its own plant.

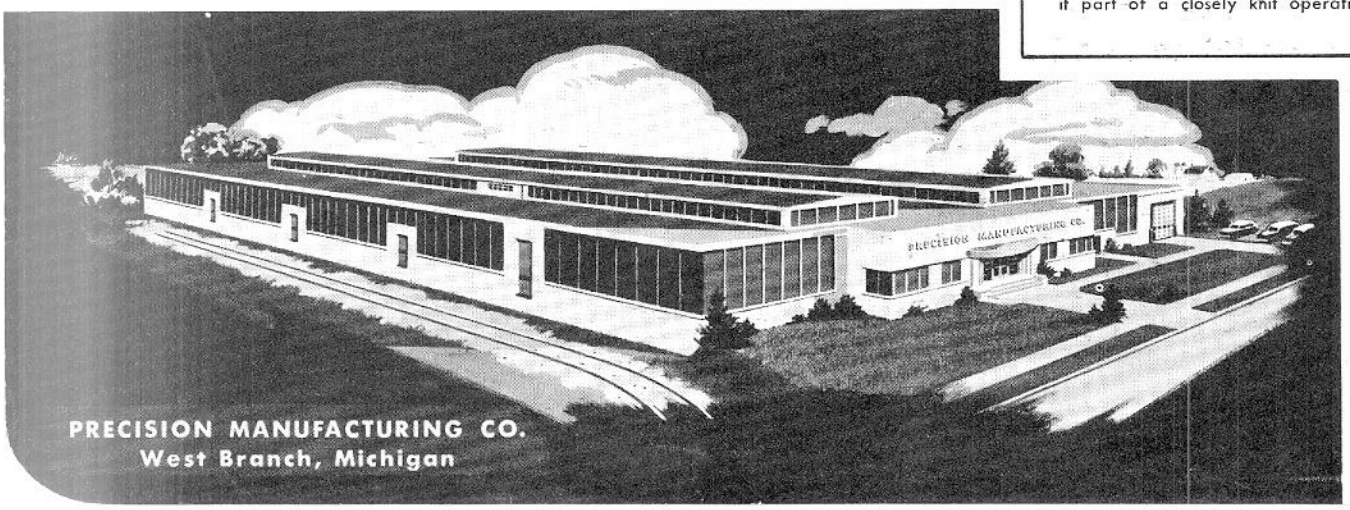


MILLER SPECIAL TOOLS HAVE BEEN SPECIFIED BY CAR DEALERS FOR MORE THAN 40 YEARS!

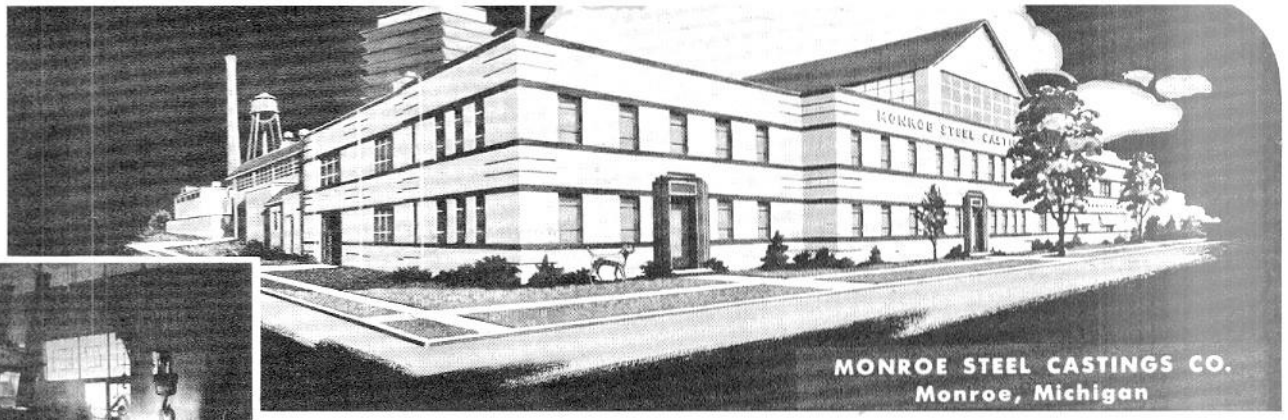
On the current roster of Miller customers are a great number of prominent car and truck dealers who bought their first Miller tools nearly 40 years ago, and these original buyers have been steady Miller customers ever since. During these years Miller tools have continued to prove their worth to car dealers in every state and in almost every country in the world.

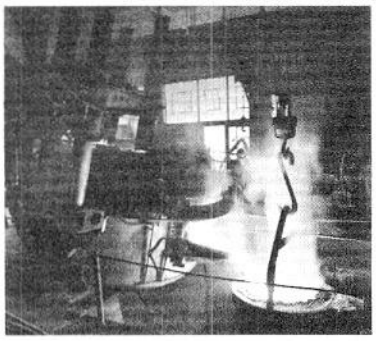
Miller's Manufacturing Subsidiary:
PRECISION MFG. CO.,
West Branch, Michigan

This modern plant is located away from Detroit to provide the advantages desired of a decentralized facility. Efficient transportation makes it part of a closely knit operation.



PRECISION MANUFACTURING CO.
West Branch, Michigan



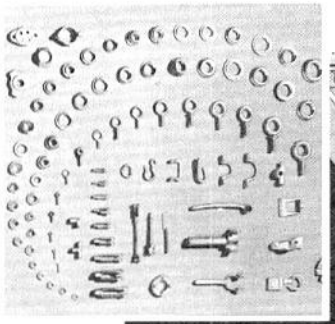


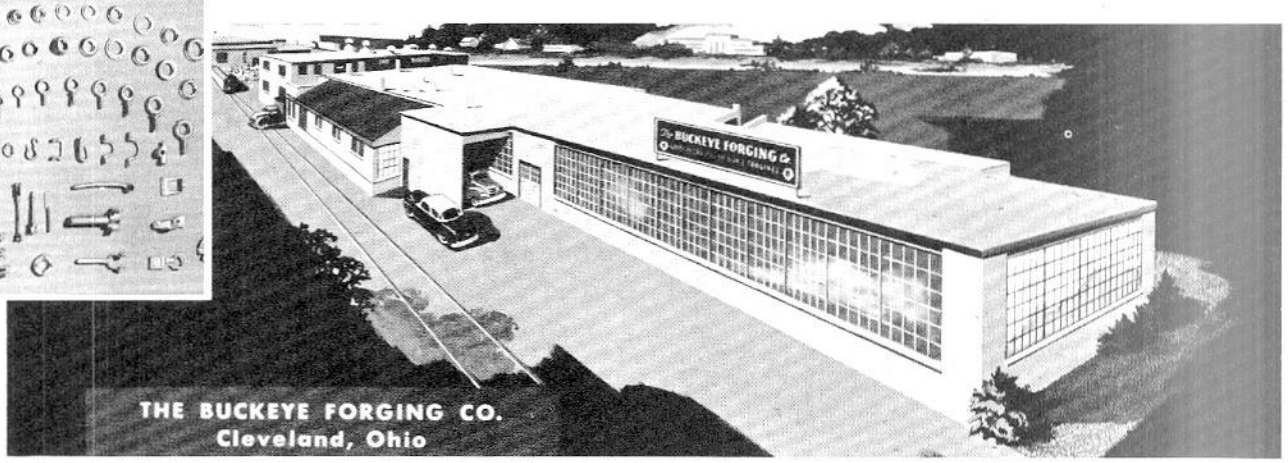
MONROE STEEL CASTINGS CO.
Monroe, Michigan

Volume producer of quality steel castings up to 1,000 lbs. for the automotive, agricultural, and other industries.

MILLER ALSO OWNS AND OPERATES THESE PRODUCERS OF QUALITY FORGINGS—CASTINGS—HAND TOOLS!

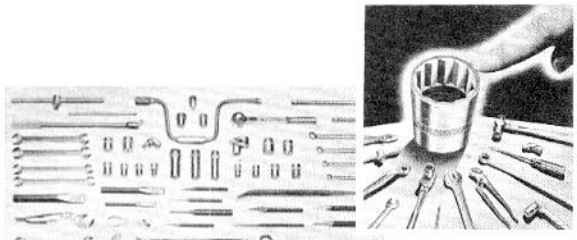
Miller serves its customers with quality products and services in a number of different markets and industries. Under the seasoned and aggressive Miller management, these subsidiary organizations with their many diversified talents and facilities make Miller exceptionally capable of serving customers well. Interrelated management provides unusual opportunities for first hand competitive experience in related yet diversified industries.





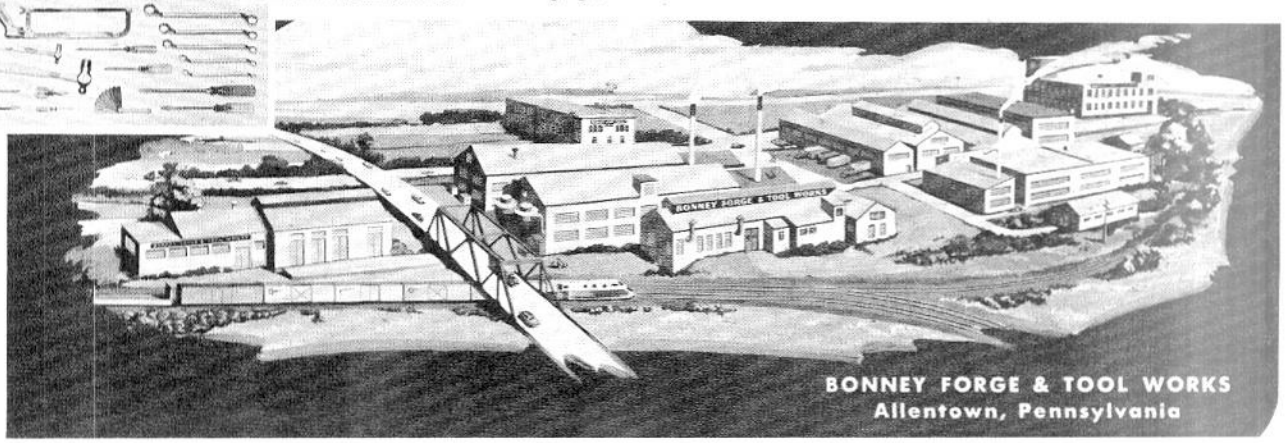
THE BUCKEYE FORGING CO.
Cleveland, Ohio

Custom and volume producer of forgings up to approximately 10 lbs. in carbon, stainless and alloy steels, and nonferrous metals.



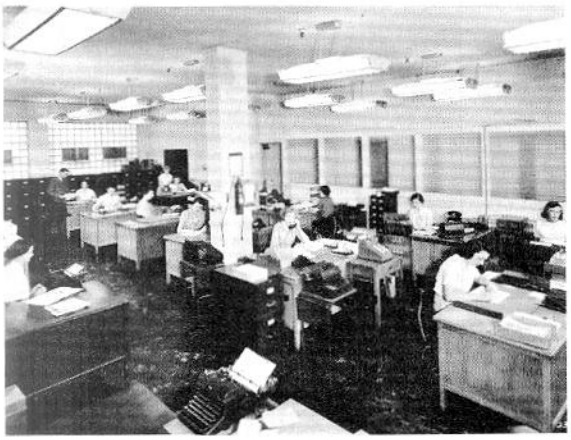
BONNEY FORGE & TOOL WORKS
Allentown, Pennsylvania

Designer and producer of all types of first-quality mechanic's hand tools, including socket wrenches, end and combination wrenches, pliers, screw drivers, hammers, punches, chisels, etc. Bonney also makes a special line of pipe fittings and special forgings.



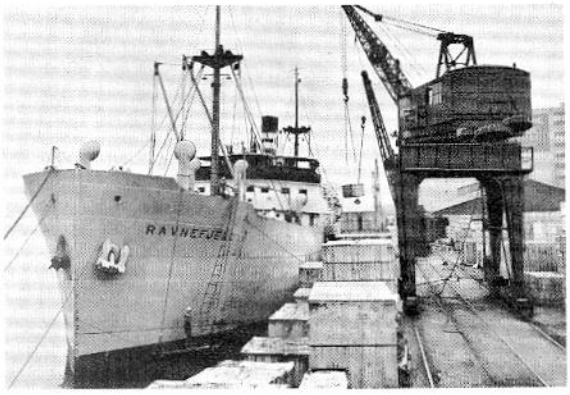
MILLER SHOWROOM ALLOWS DETROIT VISITORS TO INSPECT AND COMPARE AUTOMOTIVE SERVICE TOOLS AND EQUIPMENT!

Here, Miller customers can see a large variety of tools and equipment ranging from a small wrench to a large front-end alignment machine. Tools can be compared for particular needs without any obligation. The next time you visit your car factory, plan on visiting this permanent display of modern automotive service equipment.



SKILLED STAFF PLUS MODERN BUSINESS METHODS AND MACHINES PROVIDE FAST, DEPENDABLE CUSTOMER SERVICE!

Every effort is made to service a customer's order or inquiry on the "golden rule" basis of serving others as we would like them to serve us. A planned inventory valued in excess of half a million dollars is controlled and maintained with up-to-date I.B.M. equipment to give full meaning to this claim. Flexibility is maintained to easily and quickly handle seasonal demands that have required three to four times normal sales volume.

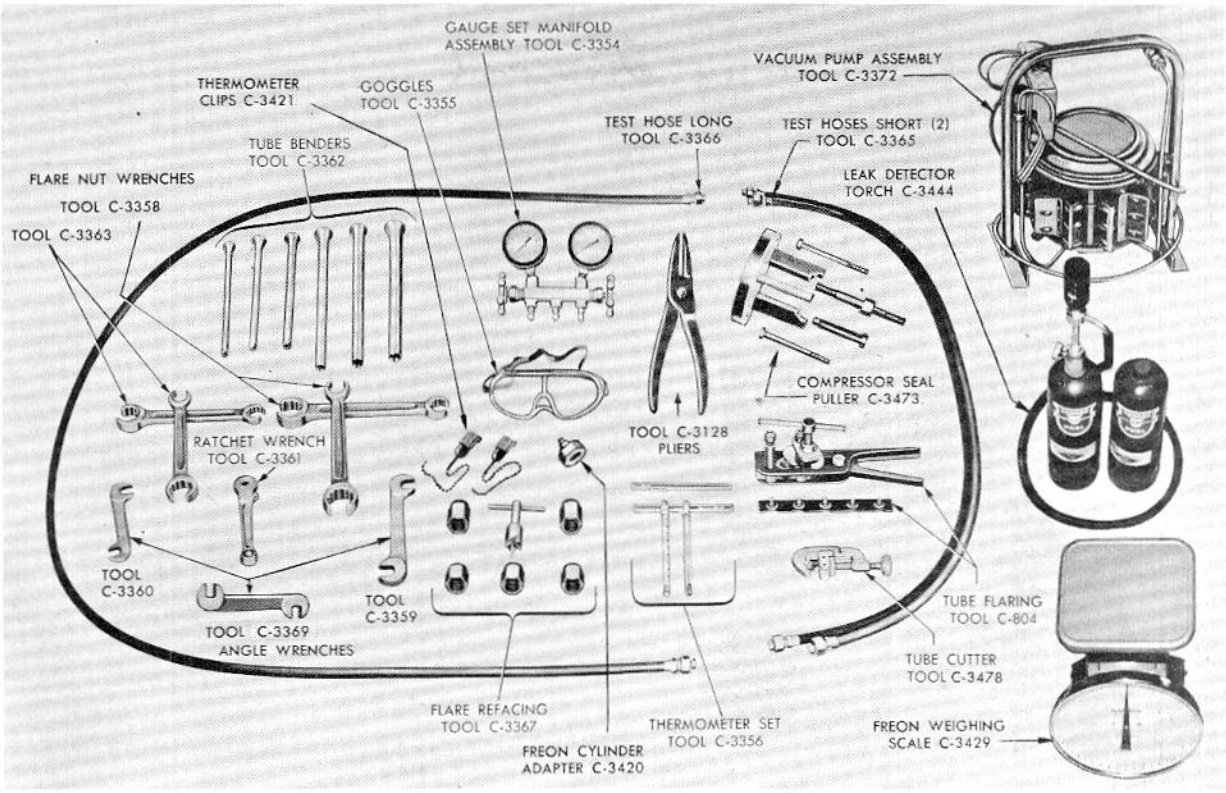


SPECIAL EXPORT DEPARTMENT RENDERS MONEY-SAVING SERVICE TO OVERSEAS CUSTOMERS!

Miller's unique method of consolidating shipments of automotive service tools and equipment made by more than 100 different manufacturers, saves cargo space and lowers landed costs for overseas dealers. Miller's experienced and specialized staff expertly prepare accurate proforma invoices to assist overseas customers to obtain necessary import documents. Direct overseas shipments are now made from Detroit eight months of the year to ports in Europe, Central and South America, Africa and the Mediterranean, saving U. S. inland freight and transfer charges.

WELL ILLUSTRATED TOOL SALES LITERATURE IS PROVIDED PROMPTLY ON ALL NEW CAR FEATURES AS RELEASED!

Experience plus close co-operation with the vehicle manufacturer means better illustrated literature that tells servicemen, at a glance, the time and effort-saving advantages of new Miller special tools. Thousands of valuable technical picture brochures like these are supplied free to all Miller customers.



C-3416-B AIRTEMP AIR CONDITIONING SPECIAL SERVICE TOOL SET

For all Airtemp systems in Plymouth, Dodge, DeSoto, Chrysler and Imperial cars. Contains one each of following special tools less items preceded by * (asterisk). See factory service bulletins and manuals for pictures of tools in use.

***C-744** TEST LIGHT—Solenoid Valve Testing.

***C-804** TOOL—Tube Flaring—For Single and Double 45° Flares on 3/16", ¼", 5/16", ⅜", and ½" Tubes. See page 83 for additional details.

C-3128 PLIERS—Drive Pulley Seal Retainer Snap Ring.

C-3354 TESTING OUTFIT—consisting of one manifold complete with two valves; one 30 x 300 lb. compound gauge; and one 600 lb. pressure gauge. (Use with C-3365 and C-3366 Test Hoses.)

C-3355 GOGGLES—Safety (pair).

C-3356 THERMOMETER SET—Two in separate pocket cases. (Calibrated from 0° to 220° F.)

C-3358 WRENCH SET—Flare Nut—Open End Box Type ⅞" and 1⅛" (two per set).

***C-3359** WRENCH—Right Angle—⅝" and ¾" Openings.

***C-3360** WRENCH—Right Angle—½" and 9/16" Openings.

C-3361 WRENCH—Ratchet Special Refrigeration Type — ¼" Sq. Drive with 3/16" Sq. and ½" Hex. in handle.

***C-3362** BENDER SET—for ¼", 5/16", ⅜", 7/16", ½", and ⅝" Tubes.

C-3363 WRENCH SET—Flare Nut—Open End Box Type ¾" and 1" Openings (two per set).

C-3365 HOSE—Test with End Plugs — 4 ft. Long (set of two). (Use with C-3354.)

C-3366 HOSE — Test with End Plugs — 8 ft. (Use with C-3354).

***C-3367** REFACER—Male Flare Seat—Complete with Adapters for ¼", 5/16", ⅜", ½", and ⅝" Fittings.

***C-3369** WRENCH—Right Angle—⅝" and 13/16".

C-3372 PUMP—Refrigeration Vacuum (Pump charged with 75 Vis. Ref. Oil—additional oil available at 70¢ per qt.).

C-3420 ADAPTER—Freon Cylinder Valve to Test Hose.

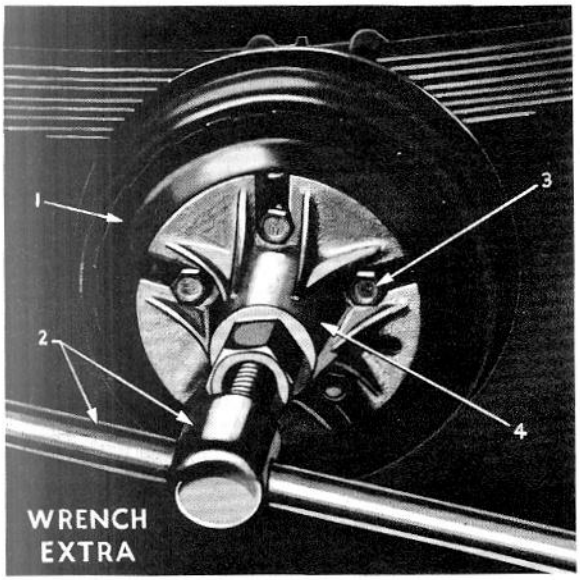
C-3421 CLIP—Set of two—For attaching Thermometer to Tube.

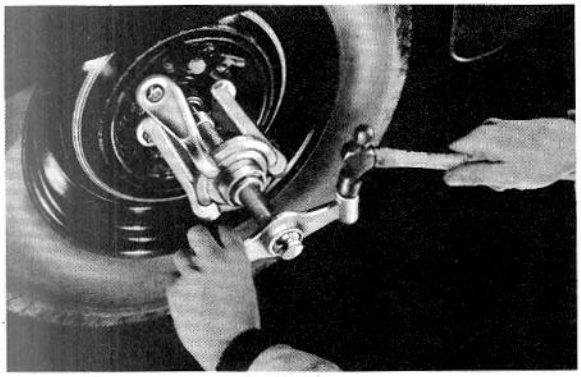
***C-3429** SCALE—Freon Weighing 50 lb. cap.—Will weigh popular 10 and 22 lb. net Freon cylinders when partially submerged in pail of hot water.

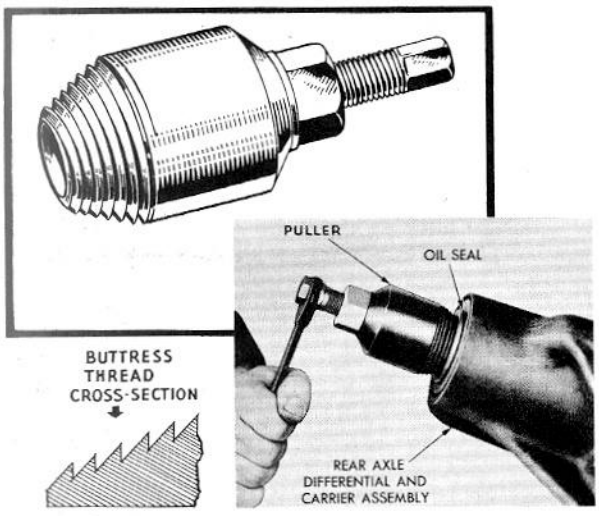
C-3444 TORCH—Leak Detector with Halide Stem and extra tank.

C-3473 TOOL—Compressor Seal and Housing Removing and Installing. This is a multi-purpose tool—it compresses the bellows seal while the snap ring is installed on the compressor crankshaft. The same tool will also remove and install the bearing housing on compressors with straight and tapered end crankshafts. See sketches in factory service bulletins that show proper assembly of tool for each different operation.

***C-3478** CUTTER—Tube. New improved model.







BUTTRESS THREAD TEETH OF THESE PULLERS REALLY **"BITE"** AND **HOLD!**

The sharp tapered leading edge of the buttress thread teeth make it easy to install these pullers in an oil seal. The flat back of the thread provides a wide, strong pulling surface, rugged enough to pull the tightest seal and provide long, dependable puller life.

REAR WHEEL AND HUB PULLER

C-319 Universal 5 stud type — Fits all Plymouth, Dodge, DeSoto and Chrysler Cars also Dodge ½, and ¾ ton Trucks with Semi-Floating Rear Axles.

You'll find this solid "bell" type puller the fastest **safe** puller you can buy. There are no loose pieces to fumble, yet it fits all your most popular service jobs. Puller is made of reinforced heat-treated steel casting, rugged enough to pull the tightest wheels and stand up under punishing everyday shop service. Use this type of puller and avoid damage to bearings and axle shaft spacer blocks so often caused by using knock-off type pullers. The heavy-duty drive handle (arrow #2) is replaced with the forged type drive handle as shown with C-845 Puller below. It is available as an extra.

UNIVERSAL WHEEL AND HUB PULLER

C-845 For All Cars and Light Trucks Including FORD.

C-844 For All Cars and Light Trucks EXCEPT FORD.

Ideal For Your Regular Needs PLUS Used Cars

Here is a single, low-cost, forged steel, adjustable puller to handle your regular service needs plus all the various makes and models of cars involved in your Used Car Department. Equipped with forged steel puller arms, center section and removable drive bar. Floating pressure pad on end of screw prevents damage to axle shafts. Drive handle also adaptable to C-319 puller.

FAMOUS MILLER "CORKSCREW" PINION OIL SEAL PULLERS

C-3214 For second series 1952 DE SOTO V-8's and all 1953 thru 1956 DE SOTO V-8's, also 1955 and 1956 CHRYSLER V-8's except CROWN IMPERIAL.

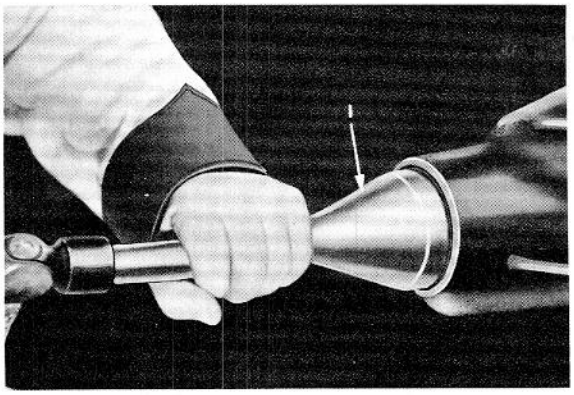
C-748 For all PLYMOUTH and DODGE Sixes and V-8's, DE SOTO Sixes, CHRYSLER Sixes and In-Line Eights, also CROWN IMPERIALS and DODGE ½, ¾, and 1 ton Truck Pinion Seals. Also Pulls Inner Section of Pinion Oil Seal on DODGE Power-Wagon and 1½ ton Routevan.

DD-958 For pinion Oil Seals on DODGE 3 ton Trucks Equipped With TIMKEN "L" 200-300, "Q" 200-300 Axles. Also TIMKEN "R" 200-300 and "U" 200-300 Axles.

DD-993 For Pinion Oil Seals on 1951 thru 1954 CHRYSLER V-8's, first series 1952 DE SOTO V-8's, and DODGE 1½, 2 and 2½ ton Trucks equipped with DODGE built axles, also 2½ and 2¾ ton Trucks equipped with Timken H200, H300 Series Axles.

DD-1117 For Pinion Oil Seal Outer Section on DODGE Power-wagon and 1½ ton Routevans. Use C-748 For Inner Section.

Screw one of these pullers into an old rusty, worn out seal and you'll be amazed how fast and easily the old seal is pulled. Works just like a corkscrew—the tighter it is screwed into the old seal—the more securely it bites. Thousands of these pullers, in several popular sizes, are now in constant use. Be sure your shop is equipped with these time-saving pullers.



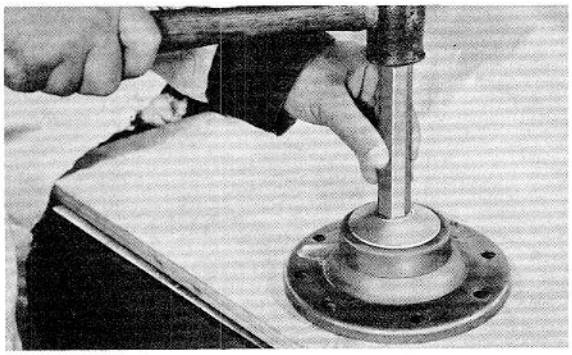
PINION OIL SEAL DRIVERS

C-359 For all Plymouth, Dodge Six and V-8's, also DeSoto and Chrysler Sixes and In-Line 8's. Also ½ and ¾ ton Dodge Trucks.

DD-807 For 1951 thru 1956 DeSoto and Chrysler V-8's and Dodge 1 ton trucks.

DD-855 For Dodge 1½ and 2 ton trucks and Power-wagon.

One incorrectly installed pinion oil seal and its resulting lubricant leakage can cause damage costing many times the value of this driver. Safeguard your service shop standards and your service customers' cars by using this properly designed driver to install these vital oil seals.



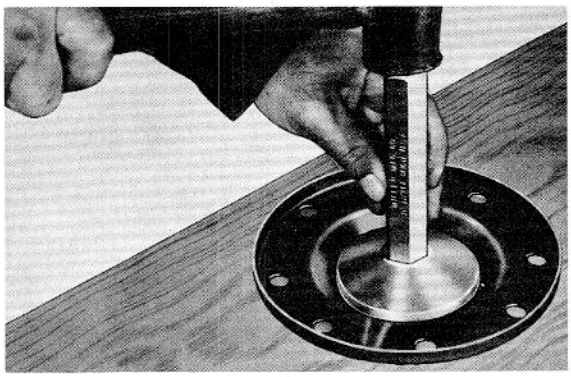
PINION OIL SEAL REMOVING DRIVERS

DD-970 For Dodge trucks with Timken H-100 axles.

DD-971 For Dodge trucks with Timken Q 100 axles.

DD-972 For Dodge trucks with Timken L-100 axles. Also Timken R 100 series axles.

Don't take a chance on distorting and ruining the pressed metal housing of these sealing assemblies by attempting to drive out an old seal and install a new one with a hammer and punch. Use the correct size driver and be sure of an oil tight fit in the housing.



PINION OIL SEAL INSTALLING DRIVERS

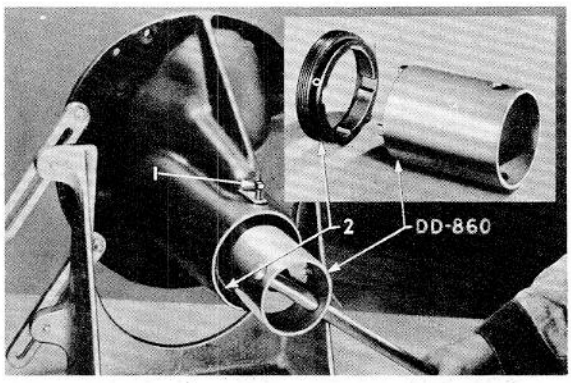
DD-951 For Dodge WR 3 ton trucks with Timken Hypoid Q 100 axle.

DD-952 For Dodge 3 ton trucks with Timken Double Reduction axles, L 200, Q 200 and Timken two speed axles, L 300, Q 300. Also Timken R 200-300, S 200-300 and U 200-300 series axles.

DD-953 For Dodge 2½ ton trucks with Timken double reduction H 200 and 2 speed H 300 axles.

DD-954 For Dodge 2½ ton trucks with Timken Hypoid H 100 axles.

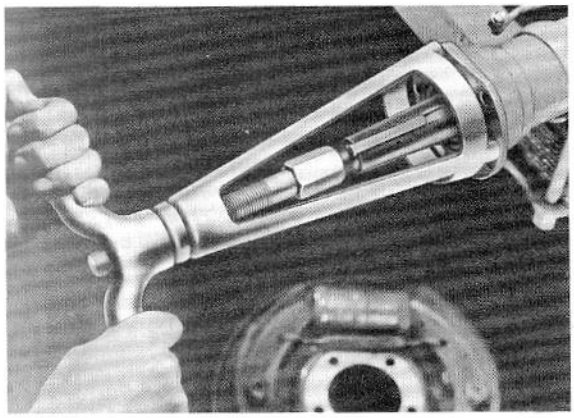
DD-989 For Dodge WK 3 ton trucks with Timken Hypoid L 100 axles.



PINION FRONT BEARING LOCK NUT WRENCH

DD-860 For Dodge 1 and 1½ Ton Routevans, and 1½ and 2 Ton Trucks.

The pinion front bearing lock nut on these models has a special type thread which prevents the danger of their loosening accidentally. This special wrench is, therefore, very necessary for the safe adjustment of this nut.



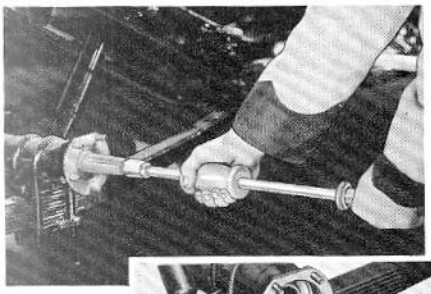
AXLE SHAFT PULLER—HEAVY DUTY—SCREW TYPE

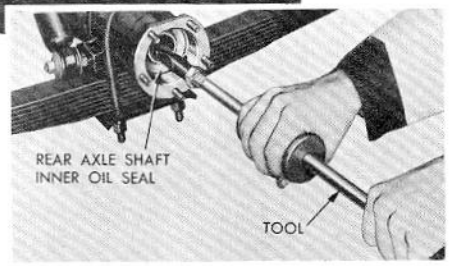
C-499 For all Plymouth, Dodge, DeSoto and Chrysler cars.

C-499-A For all Plymouth, Dodge, DeSoto and Chrysler cars, also Dodge ½ and ¾ Ton Trucks with Semi-Floating Rear Axles.

Pulls Extraordinarily Tight Shafts—

The forged wing nut operates against a thrust ball bearing, making it easy to remove an axle shaft with even a galled and burned bearing. Use this rugged puller and avoid distorting a costly axle housing by using a torch to burn and cut out damaged axles and bearings.





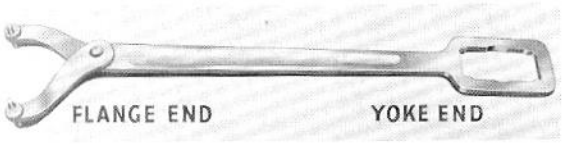
"KNOCK-OUT" TYPE AXLE SHAFT AND OIL SEAL PULLER

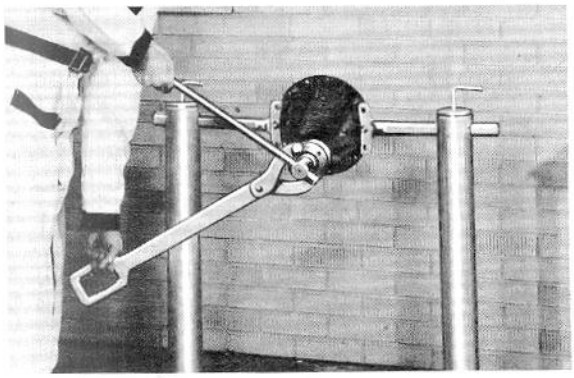
C-637 Complete with ¾" and 13/16" axle adapter and forged hook—Fits most all makes of cars.

Can Also be Used to Pull Bearing Cups

Service men like this easy to use puller because it is quick to fit to the job and can be used for so many different pulling services. The rugged forged puller hook does not round off and let go, but hangs on to the bearing or seal doing its job in a dependable manner.

Extra threaded adapters are available to attach the puller to different sizes of axle shafts, etc., allowing it to fit even more service jobs. The heavy knocker weight gives ample power to make this tool worthy of a place in your shop.





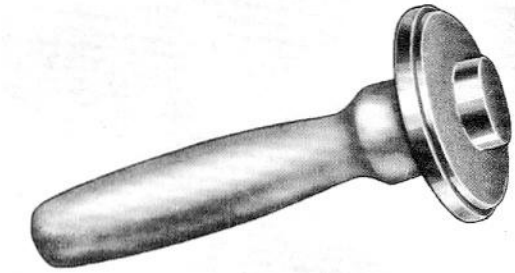
PINION COMPANION FLANGE OR YOKE HOLDING WRENCHES

C-3281 For all Plymouth, Dodge, DeSoto and Chrysler cars, also Dodge ½, ¾ and 1 Ton Trucks.

DD-949 For Dodge 1½, 2, 2½ and 3 Ton Trucks, also all Timken, E,H,L,Q,R,S and U axles.

Self Adjusting—Fits Both Types Of "U" Joint Flanges

Attempting to hold the flange or yoke with an old pipe wrench or bar and causing damage to the yoke is no longer excusable. These husky double end wrenches make a one man job of loosening or tightening the tightest pinion nut. Handles are long enough to rest against floor and allow mechanic to use both hands on pinion nut wrench, when working under a vehicle.

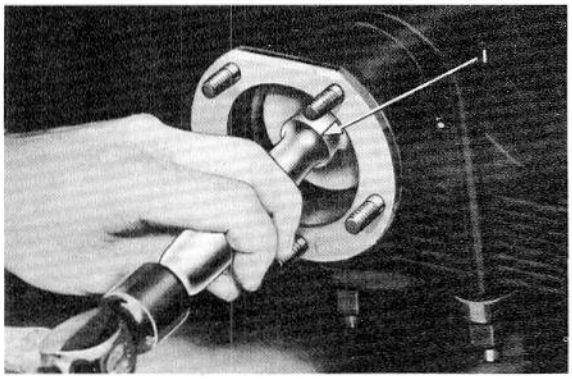


REAR AXLE SHAFT INNER OIL SEAL DRIVER

C-839 For all 1948 thru 1956 Plymouth, Dodge, DeSoto and Chrysler cars, also Dodge ½ and ¾ ton trucks.

Oil seal drivers like these are low-cost insurance against faulty oil seal installations. They are designed with accurate fitting pilots that will not over expand the inner portion of the seal yet are snug enough to hold the seal on the driver during installation, even in a deep counterbore.

An extra driving blow after the seal is seated will help expand the outside diameter of the seal to prevent leakage around the outside diameter of the seal.



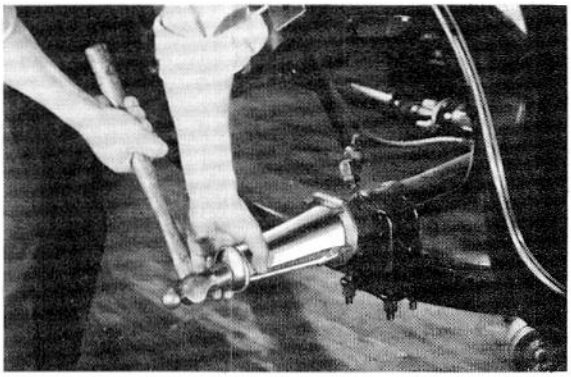
REAR AXLE SPINDLE OIL SEAL DRIVER

DD-1126 For all DODGE Routevans.

FRONT AXLE UNIVERSAL JOINT DRIVE SHAFT OIL SEAL INSTALLING DRIVER

DD-843 For all DODGE Powerwagons.

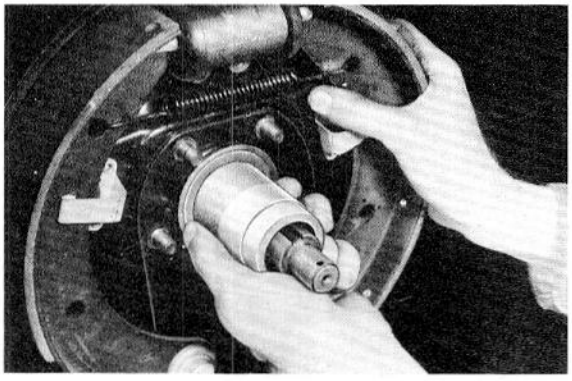
These drivers are similar to those shown at upper left but especially designed to safely install the oil seals specified.



REAR AXLE SHAFT OUTER BEARING CUP DRIVER

C-413 For all Plymouth, Dodge, DeSoto and Chrysler cars, also Dodge ½ and ¾ ton trucks.

Compare the fast safe method of installing a rear axle shaft and bearing assembly with this easy-to-use driver with the haphazard hammer and punch method and we're sure you'll order several of these low cost drivers. One driver fits all models including single and double bearing axle shafts.



REAR AXLE SHAFT OIL SEAL INSTALLING SLEEVES

C-745 For all Plymouth and Dodge cars, also DeSoto and Chrysler Sixes. (7 passenger cars excepted.)

C-757 For all DeSoto and Chrysler Eights, also all 7 passenger models.

Installation damage to the rear axle shaft oil seal can be avoided through the use of this tool. It pilots the oil sealing lip of the seal over the sharp edges of the axle shaft keyway as the complete brakeshoe support plate and seal is assembled to the axle. This is the same type of tool as used on the car assembly line.

Packed in Rugged Metal Cases.

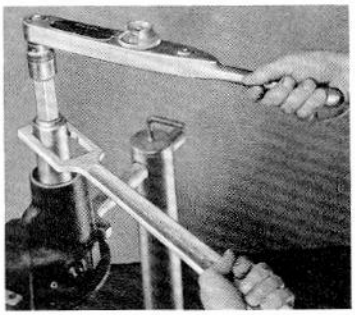
Write For Special Miller Bulletin F-663 For Complete Details On This Gauge.

Saves Mechanic's Time By Accurately Determining Correct Pinion Bearing Preload Shims And Proper Thickness Pinion Spacer Washer.

1

Gauge is Installed With Pinion Bearings Under Designed Load

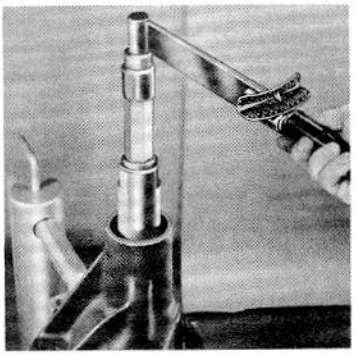
The main part of this gauge acts as a dummy pinion shaft. It is small enough to allow the bearings to easily slide over it. This picture shows the pinion shaft nut being accurately tightened to the required 175 to 185 foot pounds.



2

Pinion Bearings Are Checked For Actual Preload With C-685 Inch Pound Torque Wrench

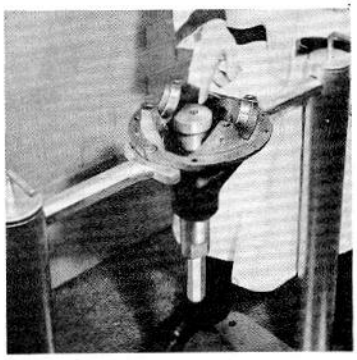
Definite preloads for these bearings are specified to eliminate end play and insure proper gear alignment under load. The C-685 Inch Pound Torque Wrench will accurately indicate the required 12½ to 25 inch pounds turning torque when pinion bearings are properly preloaded.



3

Gauge Block is Installed

This accurately ground block is easily assembled to the arbor portion of the tool with a hardened set screw. It provides a dependable "zero" or starting position to check proper pinion bearing spacer washer.

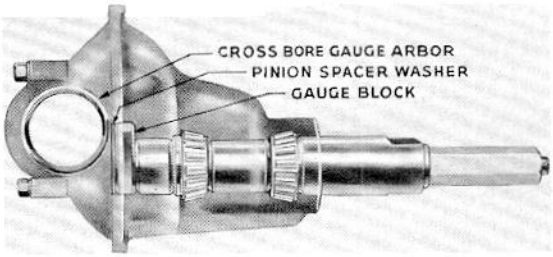


REAR AXLE GAUGE

C-758-D-2 Complete Set for all Plymouth, Dodge, DeSoto and Chrysler 8¼" and 8¾" Axles, also ½ and ¾ ton Dodge Trucks with semi-floating rear axles.

For Accurately Checking and Resetting PINION BEARING PRE-LOAD and RING GEAR and PINION ADJUSTMENTS.

A semi-skilled mechanic using this gauge set will outperform an axle repair specialist with 15 years' experience. It takes only five simple, easy steps to properly set up a rear axle on the FIRST TRY when you use this gauge set. It is a practical, mechanic's type gauge with no micrometer adjustments or dial indicators to read that often require skill and practice to use effectively. Any mechanic can use it and get accurate, first-time results. Consult factory service bulletins, films, and manuals for latest axle setting specifications. Owners of first model gauges can obtain adapters to latest model axles.

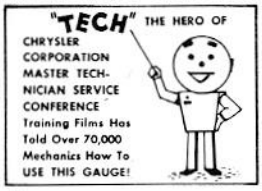


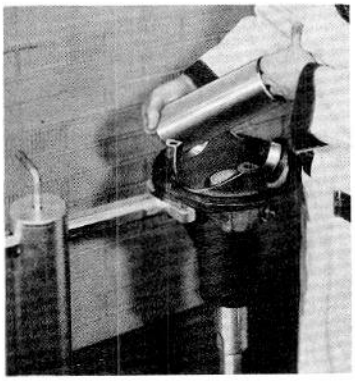
Gauge Assembled In Typical Pinion Housing.

4

Cross Bore Gauge Bar Is Installed

This accurately ground cylinder acts as a master arbor, and easily clamps in the carrier cross bores of all axles.

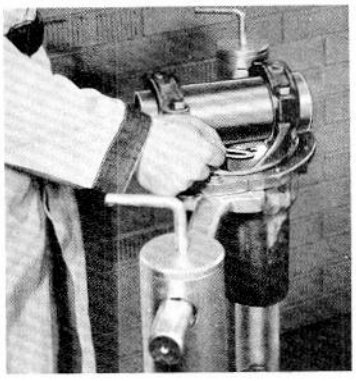

"TECH" THE HERO OF
CHRYSLER CORPORATION MASTER TECHNICIAN SERVICE CONFERENCE
Training Films Has Told Over 70,000 Mechanics How To USE THIS GAUGE!

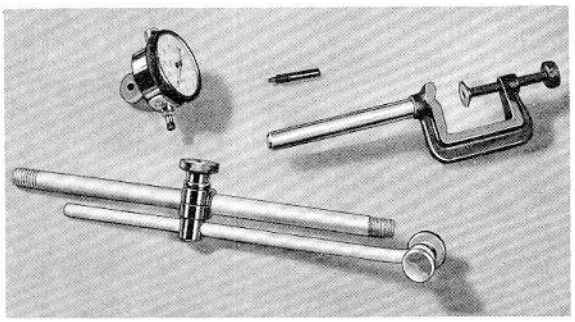


5

Pinion Bearing Spacer Washer Is Accurately Determined

These spacer washers are available in .002" variations. Merely select the proper size that will just slip between the gauge block and the cross bore arbor. This is the spacer to assemble on the pinion shaft if pinion is etched "o". A +2 pinion would require a spacer .002" thinner than indicated by the gauge. Likewise a —2 pinion would require a spacer .002" thicker.





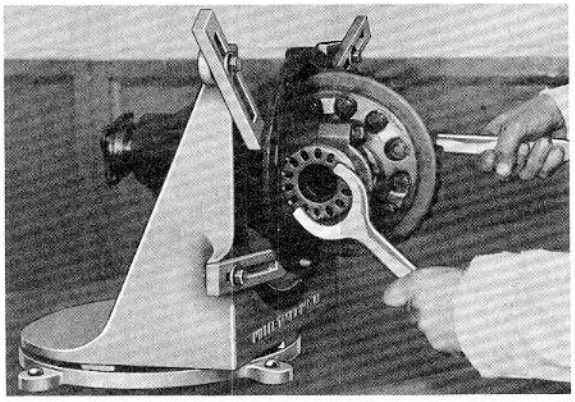
DIAL INDICATOR—CLAMP—SWIVEL AND ATTACHING RODS

C-3339 Complete as illustrated for all cars.

Every service shop needs a set of dependable checking tools like this to accurately check ring gear backlash, axle shaft end play, bent shafts and a multitude of other regular service jobs. Set includes SP-1917 Anvil for checking PowerFlite transmission power train end play.

Dial indicator is 1¾" in diameter and calibrated in a plus and minus scale to easily read one thousandths of an inch calibrations. A long and short anvil is supplied for the indicator. Damaged indicators may be returned for immediate exchange for repaired indicators at nominal cost.

Do not attempt to check clutch housing alignment with this set of tools—use Tool C-869, see Page 44.



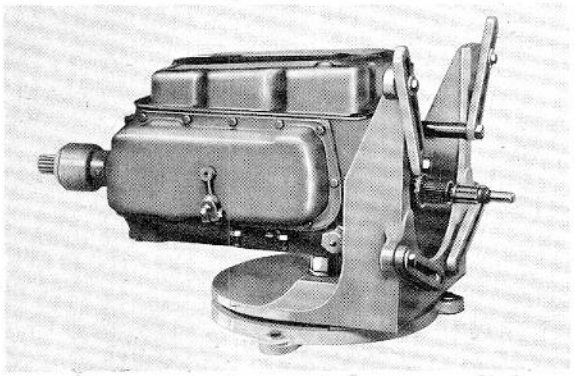
DIFFERENTIAL AND TRANSMISSION REPAIR STAND

C-399 Bench type for all cars.

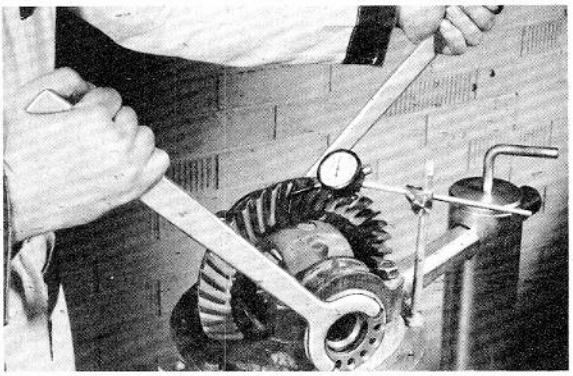
Stop wasting time and avoid the danger of personal injury from wrestling these heavy units on the floor or bench when repairing them without a stand like this. Your men can save time and do better work when the transmission or differential is firmly held in the most convenient working angle in one of these stands.

Adjustable arms fit wide variety of units—upper part of stand swivels through full 360° circle. Base bolts to bench.

Stand accommodates rear axle differential assemblies and heaviest automatic transmissions as shown. See page 122 for C-3280 Stand for PowerFlite Transmissions.



See Floor Type Stand on Pages 17 and 119

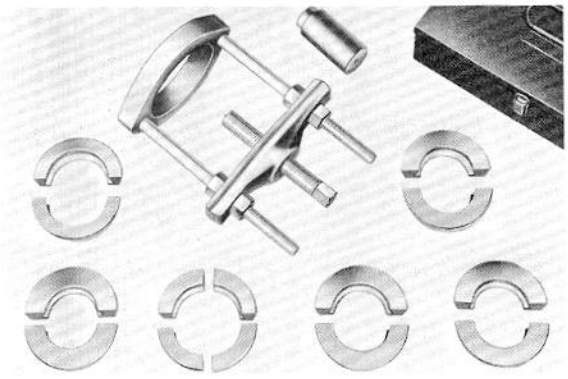


DIFFERENTIAL BEARING ADJUSTING SPANNER WRENCHES

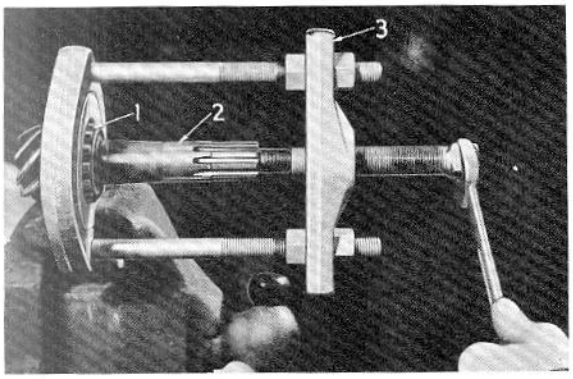
C-406-A For all cars and light trucks. (Pair)

Extra Long Handles Provide Extra Leverage.

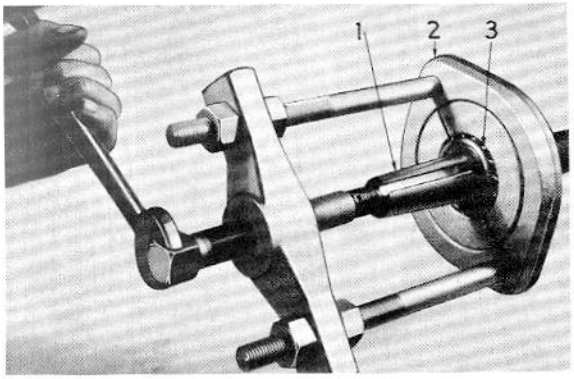
A pair of these special long handled, forged spanner wrenches allows a mechanic to accurately adjust these vital bearings exactly as specified in the car factory service manual. Wrenches are machined from high grade steel, drop forgings and scientifically heat treated to provide long dependable life.



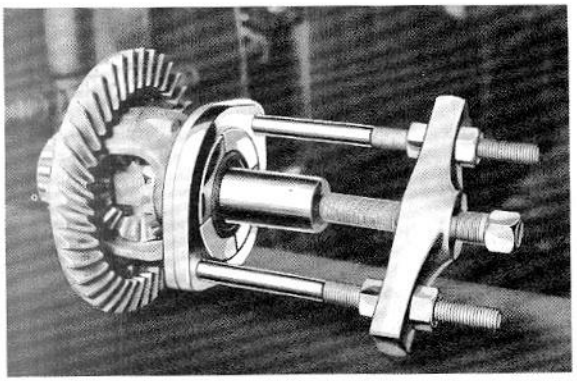
Adapter Plate Application Chart Packed With Every Tool.



Removing "Blind-Shouldered" Pinion Bearing.



Removing Typical Axle Shaft Bearing.



Removing Differential Side Carrier Bearings.

ROLLER BEARING PULLER SETS

C-293-D1 For Dodge and Plymouth Cars. Contains: 7 Sets Adapter Plates, 13, 18, 21, 22, 26, 27, and 36 in metal case.

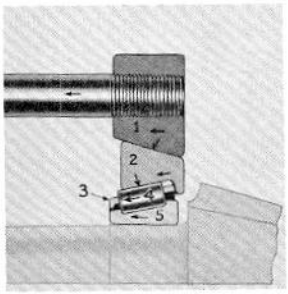
C-293-E2 For DeSoto and Plymouth Cars. Contains: 5 Sets Adapter Plates, 13, 18, 21, 36, and 37 in metal case.
See DD-914 Chart on next page for certain Adapters for V-8 models.

C-293-F2 For Chrysler and Plymouth Cars. Contains: 8 Sets Adapter Plates, 13, 17, 18, 21, 23, 26, 36, and 37 in metal case.
See DD-914 Chart on next page for certain Adapters for V-8 models.

Salvages Expensive Bearings From Damaged Shafts and Differentials

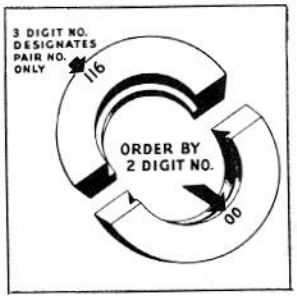
Through the use of different size adapter plates, this one puller can be quickly adapted to remove various sizes of tapered roller bearings from axle shafts, pinion shafts, differentials, etc. It allows expensive roller bearings to be quickly salvaged from worn or damaged shafts. Chart is supplied with each puller set showing proper puller plate for each size bearing.

Pulling Pressure Does Not Distort Bearing



Here you see how the pulling pressure is exerted from the puller base 1 progressively through the puller adapter 2, bearing roller retainer 3, rollers 4, and finally to bearing hub 5. Adapters hold bearing securely for safe, fast removal of all popular sizes of bearings.

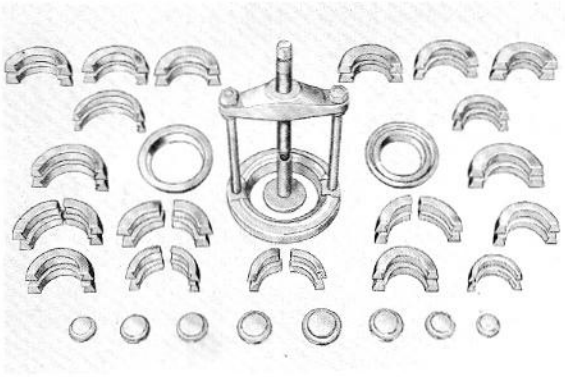
All Adapter Plates Available Separately

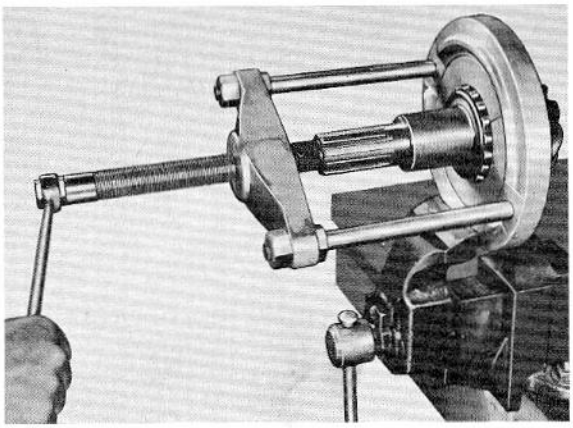


Be sure your puller is ready to save time and parts by having it equipped with all needed adapters. Be sure all adapters are in good working condition. Order by two digit part number or by bearing number to be pulled.

C-293 Pullers Can be Used As A Portable Tool Or In Shop Arbor Press

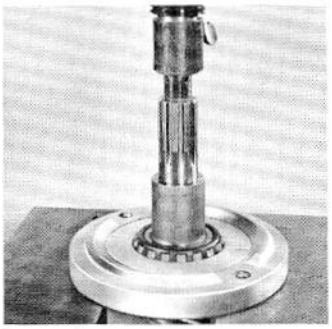
Illustrations at left show how puller is assembled as a portable tool to safely remove various types of tapered roller bearings from most frequently serviced units. Puller base can also be used without top screw assembly in ordinary arbor press. Adapters for this puller may also be used with DD-914 heavy duty puller shown on next page.



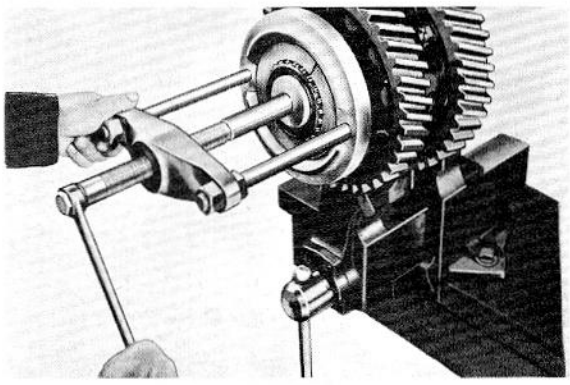


Salvaging A Good Pinion Bearing

Expensive bearings are easily and quickly reclaimed with this portable puller from broken or damaged shafts.



PULLER BASE CAN BE USED IN ARBOR PRESS TO SPEED UP SAFE REMOVAL OF EVEN A "FLUSH SHOULDERED" ROLLER BEARING



PULLER IS EASILY PORTABLE—NO NEED TO DRAG HEAVY TRUCK PARTS TO ARBOR PRESS

HEAVY-DUTY ROLLER BEARING PULLER SET

DD-914-K-1 Complete Set includes three master rings and adapters 13, 15, 17, 18, 21, 22, 23, 26, 27, 36, 37, 61, 63, 64, 65, 67, 68, 69, 70, 71, 72, 73, 74, 76, 80, 83, and 89.

DD-914-C Set same as DD-914-K-1 less adapters 13, 18, 21, 22, 26, 27, 36, and 37. For shops equipped with C-293-D-1 and servicing passenger cars and trucks in the same building. Complete DD-914-K-1 Puller recommended for separate truck service shops.

This patented puller removes tapered roller bearings safely and quickly, ready to be used again on a new shaft. Various sizes of adapter plates make it a tool that never becomes obsolete. As new bearings must be serviced so will new adapters be made available.

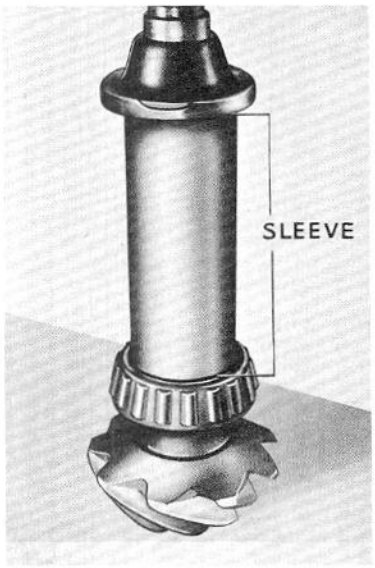
1951 Through 1954 Models Require Part Of This Puller To Service Larger Bearings

Use of larger bearings that cannot be accommodated in the C-293 Pullers can be serviced with parts of this set. See chart for adapter plates and master ring required. Adapter Nos. under 40 fit C-293 Pullers — higher Nos. are for DD-914-K-1 Puller. DD-914-9 Ring fits C-293 Adapters.

APPLICATION CHART

MODELS	PINION BEARING	DIFF. CASE BRG.	AXLE SHAFT
All 1950 and earlier Plymouth, Dodge, DeSoto and Chrysler Sixes. (7 pass. models excepted)	21	18 & 40	13
All 1951 thru 1956 Plymouth and Dodge, also 1951 thru 1954 DeSoto and Chrysler Sixes. (8 pass. models excepted)	36	18 & 40	13
All 1950 and earlier Plymouth, Dodge, DeSoto and Chrysler 7 pass. models, taxis, suburbans, etc.	17	18 & 40	23
1951 thru 1954 Chrysler V-8, also 1952 First Series DeSoto V-8 and 1951 thru 1954 Plymouth, Dodge, DeSoto and Chrysler 8 pass. models	89*	18 & 40	23
Chrysler 1955 and 1956 V-8, also 1952 Second Series and 1953 thru 1956 DeSoto V-8	37	18 & 40	23
Dodge ½ and ¾ ton trucks	21	18 & 40	23
Dodge 1 ton trucks	26	27 & 40	
Dodge Powerwagon	63	83 & 41	
Dodge 1½ ton truck	65	61 & 44	
Dodge 2 ton truck with Dodge Hypoid axle	65	64 & 45	
Dodge 2 ton truck with Eaton 1350 axle	15	67 & 48 80 & 48	
Dodge 2 ton truck with Eaton 16050 and 16500 axles	15	76 & 46 67 & 48	
Dodge 2½ ton truck with Timken Hypoid H-100 axles	73	70 & 47	DIFF. CROSS SHAFT BRG.
Dodge 2½ ton truck with Timken H-200 and H-300 axles	64	70 & 47	68
Dodge 3 ton truck with Timken L-100 axles	72	67 & 48	
Dodge 3 ton truck with Timken L-200 and L-300 axles	69	67 & 48	68
Dodge 3 ton truck with Timken Q-100 axle	75	71 & 48	
Dodge 3 ton truck with Timken Q-200 and Q-300 axles	69	71 & 48	74

*DD-914-8 Adapter Ring required to use this adapter in an arbor press.



PINION BEARING INSTALLING SLEEVES

DD-955 For 1955 and 1956 Chrysler V-8's, also 1952 Second Series and 1953 thru 1956 DeSoto V-8. All 7 pass. cars. Dodge 1 ton trucks, also Dodge trucks equipped with Eaton 1350, 16050 and 16500 axles and Timken E series axles.

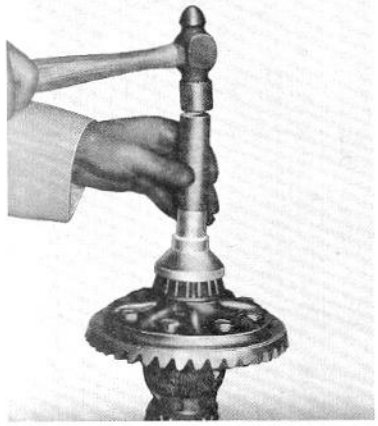
DD-956 For Dodge Powerwagons and Dodge trucks with Dodge Built axles, also Timken H-100 and L-100 Hypoid axles and Timken E-300 axles.

DD-957 For Dodge trucks with Timken double reduction H-200, L-200 and Q-200 axles, 2 speed H-300, L-300 and Q-300 axles, also Timken Q-100 Hypoid axle.

DD-996 For all Plymouth and Dodge cars, also all DeSoto and Chrysler Sixes (7 pass. cars excepted), and Dodge ½ and ¾ ton trucks.

C-3095 For 1951 thru 1954 Chrysler V-8, also First Series 1952 DeSoto V-8.

Special sleeves like these will save many bearings and hours of mechanic's time now spent looking for some makeshift piece of pipe to install these bearings. Designed for use in arbor presses. See Page 22 for Pinion Pilot Bearing Installing Sleeves.



DIFFERENTIAL CASE SIDE BEARING INSTALLING DRIVERS

DD-1004 Differential side bearing for Chrysler Crown Imperial and Dodge 1 ton trucks.

DD-1005 Differential side bearing all Plymouth, Dodge, DeSoto and Chrysler cars (except Crown Imperial) including taxicabs and 7 and 8 passenger models; also Dodge ½ and ¾ ton trucks.

These drivers pilot over the tapered edge of the roller bearing, however, their design allows the driving force to be applied to the hub of the bearing. This makes it easy to accurately align the driver while avoiding any danger of damaging the bearing.

DIFFERENTIAL CASE SIDE AND CROSS SHAFT ROLLER BEARING DRIVERS

DD-960 For differential side bearings on Dodge trucks with Timken Q-100, Q-200 and Q-300 axles. Also Timken R-200, R-300, S-200, S-300, U-200 and U-300 axles.

DD-961 For differential side bearing on Dodge trucks with Timken H series axles.

DD-962 For differential side bearing on Dodge trucks with Eaton 1350 (left only), 16050 and 16500 axles (right only) also Dodge trucks with Timken L series axles.

DD-981 For differential Cross Shaft bearing on Dodge trucks with Timken Q axle. Also Timken S-200 and U-200 axles.

DD-982 For differential Cross Shaft bearing on Dodge trucks with Timken H-200, H-300, L-200 and L-300 axles.

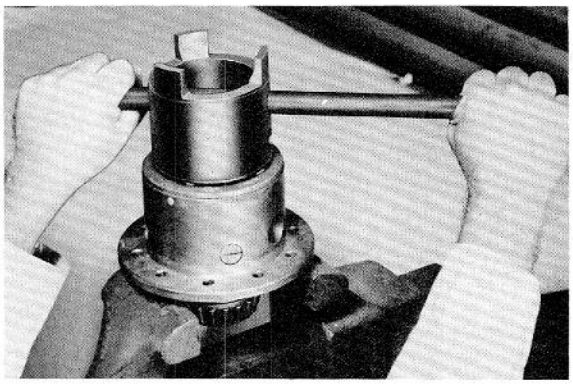
DD-983 For differential side bearing on Dodge trucks with Dodge Built Hypoid axle. Also Timken E-100 and E-300 axles.

DD-997 For differential side bearing on Dodge trucks with Eaton 16050 and 16500 axles. (Left side only.)

DD-998 For differential side bearing on Dodge trucks with Eaton 1350 axles. (Right side only.)

DD-1002 For differential side bearing for Dodge 1½ ton truck with Dodge Hypoid axle.

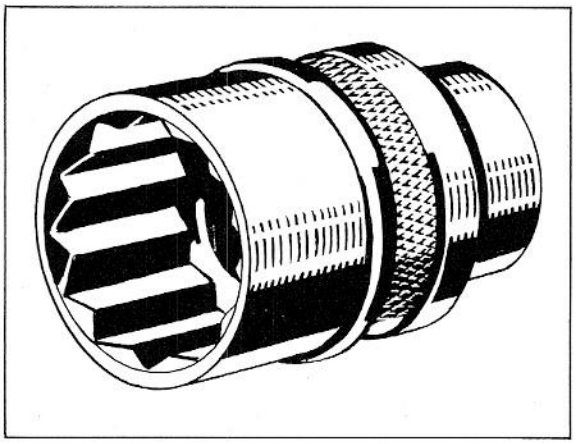
DD-1003 Differential side bearing for Dodge 1 ton Powerwagon.



DIFFERENTIAL CASE CAP REMOVING AND INSTALLING WRENCH

DD-921 For all Dodge trucks including Routevans and Powerwagons. Also 1951 and 1952 Chrysler and DeSoto V-8 and Plymouth, Dodge, DeSoto and Chrysler 8 passenger models.

Replacement of the gears in this type differential case require the removal of the end caps which have a special thread to hold them tightly in position in addition to their locking pins. This sturdy heavy duty wrench is essential for the safe and quick adjustment of these caps. It is double-end to fit two different sizes of caps.



PINION FLANGE NUT SOCKETS

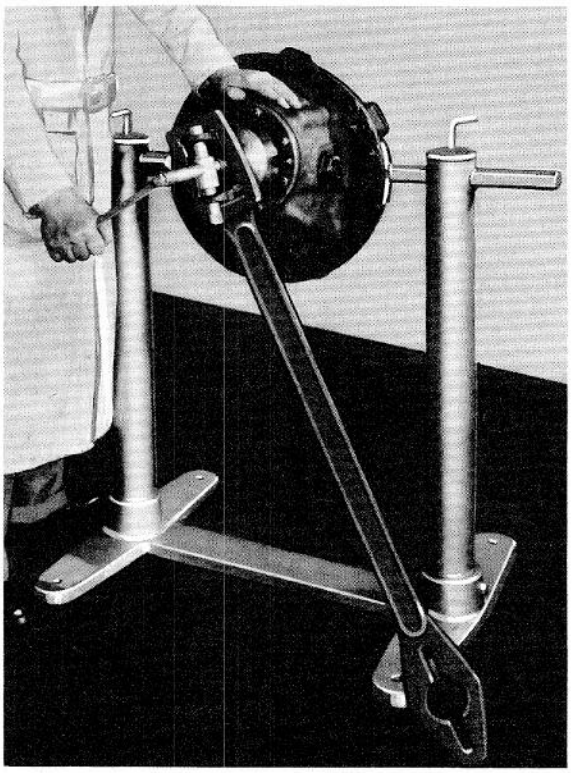
C-3152 For Chrysler and DeSoto V-8 models with 8¾" axles. Size 1½" hex.

DD-1001 For Dodge 3 ton trucks. Size 2⅛" hex.

DD-1175 For Dodge 4 ton trucks. Size 2¼" hex.

Special Undersize Outside Diameter Sockets Fit Inside Pinion Flange C'bore.

Don't be slowed down with an ordinary socket that won't fit in the counterbore of the universal joint flange. Get these specially machined sockets that clear the counterbore yet have ample strength to obtain maximum required torque. Sockets fit all ¾" square drive attachments.



DIFFERENTIAL CARRIER AND TRANSMISSION REPAIR STAND

DD-1014 Stand with set of C-3304 Arms. For all cars and trucks.

C-3304 Set of four extension arms to adapt Stand to PowerFlite Transmissions.

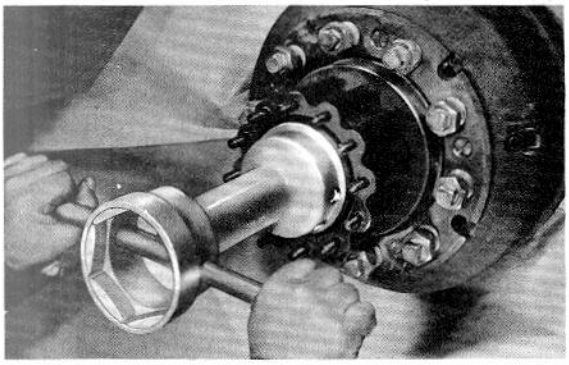
Much time can be saved by efficiently mounting a differential or transmission in this carrier before attempting to rebuild or repair it. Stand holds the heavy differential in a safe, convenient working position. Equip your shop with several of these stands for both safety and efficiency.

Stand has heavy cast base with rugged steel tubing uprights. Mounting arms are adjustable from 6" to 23" and allow either a differential or transmission to be revolved end over end through a complete circle. Stand is shipped "knocked-down" and can be assembled with only two cap screws.

PINION FLANGE HOLDING WRENCH FOR DODGE TRUCKS

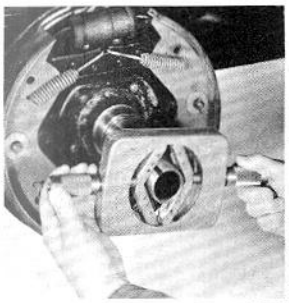
DD-949 Double-end for most all trucks.

A heavy-duty wrench like this is like having another man on the job. Safely holds pinion shaft while torquing pinion nut to required 800 or 900 foot-pounds. Also a time saver when pulling yokes.

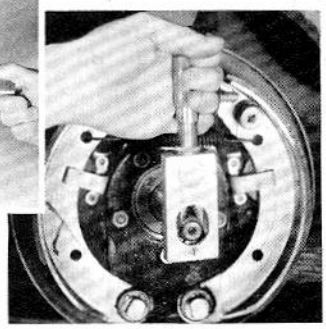


Wrenches Can Be Used With Wheels On Or Off Truck.

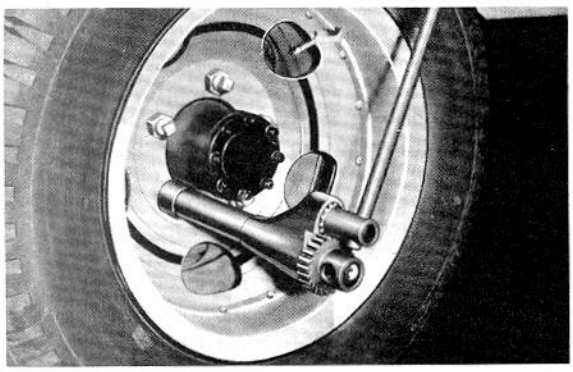
Properly adjusted wheel bearings last longer and assure safer truck operation for less cost. These special wrenches make it easy to properly make these adjustments for each wrench is engineered to fit, save time and allow a mechanic to "feel" the adjustment and then be able to lock up the lock nut without changing the bearing adjustment.



DD-1163
Repairing Axle Tube Thread



DD-1162
Reclaiming Damaged Front Spindle



DD-980 Powerwrench Instantly Identifies Loose Square Nuts

Elongated mounting holes, broken studs and other damage to truck and bus wheels is often caused by loose square nuts. If the outer nut is tightened before the inner square nut, with this wrench, the small gear will back around the large gear and give instant warning that inner square nut is loose.

WHEEL BEARING ADJUSTING NUT WRENCHES

Low-Cost, Rugged Wrenches For Shop Use— Also Ideal For Sale To Truck Operators To Keep On Vehicle For Emergency Service

DD-437 Size 3¼" and 3-13/16" Octagon. For 1936 to 1941 Dodge 3 Ton Trucks. Also all Dodge Trucks with Timken Tandem axles.

DD-438 Size 3⅛" and 3⅝" Octagon. For 1936 thru 1955 Dodge 1½ and 2 Ton Also B and C Series 2½ Ton Trucks, including models equipped with Eaton 1350, 16050 and 16500 axles.

DD-823 Size 2" Hex. For Front Axle on U. S. Army ½ Ton Dodge Trucks.

DD-824 Size 2-9/16" Octagon. For 1941 thru 1956 Dodge 1 Ton Trucks; also Dodge Powerwagons and 1 and 1½ Ton Routevans.

DD-917 Size 3¼" Hexagon. For Outer Nut on 1946 Dodge 2 Ton Trucks.

DD-926 Size 3½" and 4" Hexagon. For 1946 thru 1956 Dodge 2½, 2¾ and 3 Ton Trucks with Timken H, L, and Q Series axles. Also Timken R series axles.

THREAD REPAIR TOOLS

DD-1162 Range ¼" to 1" diameter.

DD-1163 Range 2" to 4" diameter.

Repairs Any Pitch Or Diameter Thread Within Its Size Range

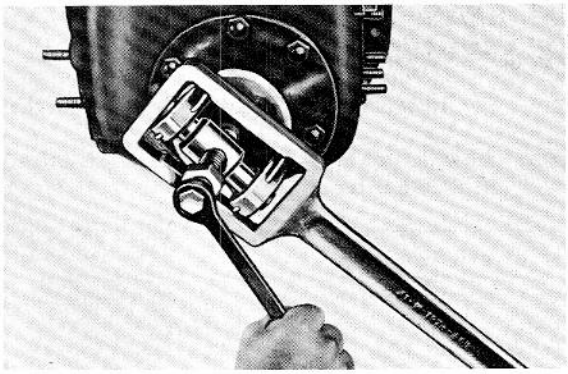
Before attempting to **start** a nut on a bolt or stud in bad condition, use one of these simple tools and rechase the thread right on the job and prevent thread-stripping or cross-threading. When used first on a damaged bolt, it prevents further damage to the nut. Cleaners are easily set to root diameter of threads by knurled-handle screw adjustment. These tools should be in every automotive service shop. Order yours NOW!

GEARED POWERWRENCH FOR TRUCK WHEEL MOUNTING

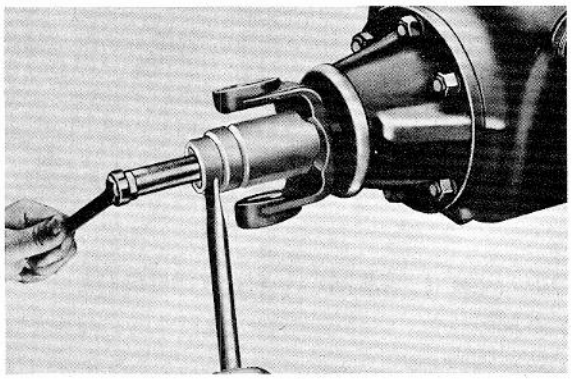
DD-980 Wrench complete with #64 Budd inner cap nut adapter, standard bar handle and 36" anchor tube handle. For all Dodge trucks and Budd dual wheels. (Motor wheel adapter available as an extra.)

Geared Head Provides 3 to 1 Power For Truck and Industrial Uses

No truck service shop can afford to be without this important, heavy-duty wrench that **triples** the strength of its user. Many large bus and truck fleets carry one on every vehicle for emergency wheel service. Two-in-one wrench design services both squared stud and outer locking hex. nut. Can also be used on spring "U" bolts, track bolts, large industrial equipment, etc. All parts available separately to service damaged wrenches.

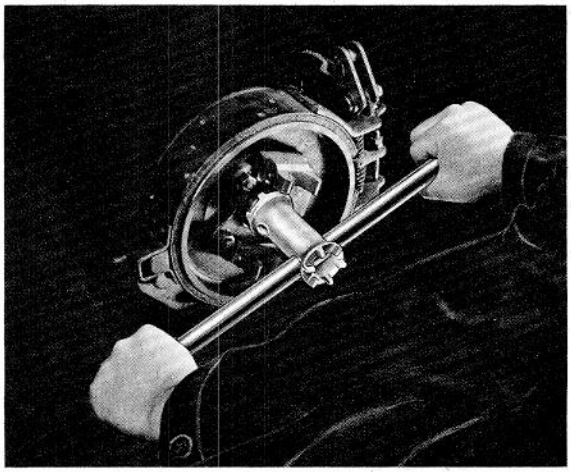


DD-1049 Puller Illustrated



Tools Absorb Installing Pressures And Protect Pinion Shaft And Bearings

These tools thread onto the pinion or transmission shafts and absorb the pressure required to press the yoke or flange in place. The pinion or transmission bearings are then not subjected to damaging shock as when these parts are pounded in place with time consuming hammer beatings.



PINION AND TRANSMISSION COMPANION FLANGE OR YOKE PULLERS

C-452 For all Plymouth, Dodge, DeSoto and Chrysler cars. See page 128 in UNIVERSAL JOINTS Section for actual picture of this tool.

C-549 For Dodge ½, ¾, 1, 1½ and 2 Ton Trucks and Dodge Powerwagon. See page 22 for actual picture of this tool.

DD-1049 For Dodge Trucks and Timken H,L and Q, axles.

Removing flanges or yokes with these easily used pullers saves time and damage to parts that usually result from old-fashioned hammer beating methods. Pullers may be used with unit in or out of vehicle.

PINION AND TRANSMISSION COMPAION FLANGE OR YOKE INSTALLING TOOLS

C-496 For all Plymouth, Dodge, DeSoto and Chrysler cars, except 7 and 8 passenger models, taxicabs and Chrysler Crown Imperial models. Also used on Dodge ½ and ¾ Ton Trucks.

DD-969 For Dodge 2, 2½, 2¾ and 3 Ton Trucks, also Timken E,H,L,Q,R,S and U axles.

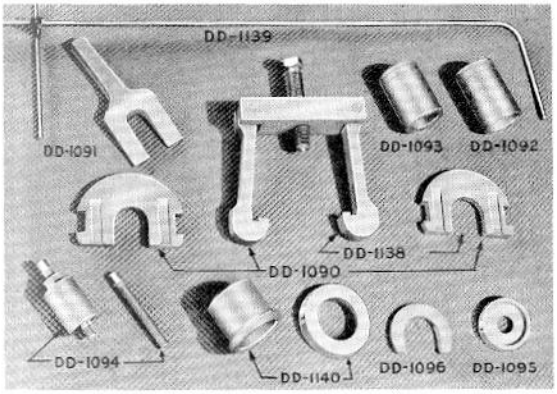
DD-999 Includes two special buttress threaded screws. For servicing all Plymouth, Dodge, DeSoto and Chrysler cars including 7 and 8 passenger models, taxicabs and Chrysler Crown Imperial models, also Dodge ½, ¾, 1, 1½ Ton and Powerwagon Trucks.

REAR AXLE PINION SHAFT AND TRANSMISSION MAIN DRIVE SHAFT NUT WRENCH

DD-406 For all Dodge Trucks with round slotted nuts.

Double End Wrench Fits Nuts With Thick Or Thin Slots

The transmission and pinion shaft nuts for which this wrench was designed are round and slotted instead of the conventional hexagon or square type, so that it is very important to have this special wrench.



DD-1089 Tool Set Illustrated Above

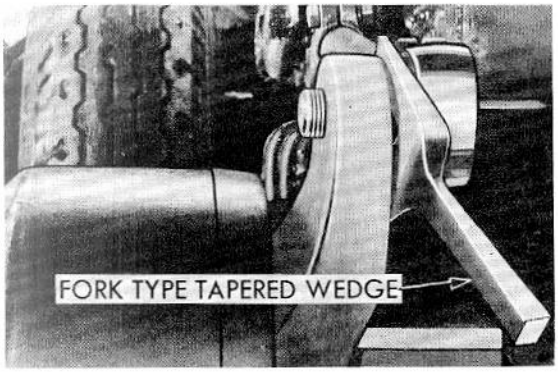
TANDEM REAR AXLE SPECIAL SERVICE TOOL SETS

DD-1131 For TIMKEN Axles Used in DODGE Trucks.

DD-1089 For All TIMKEN Axles Including Those Used In DODGE Trucks.

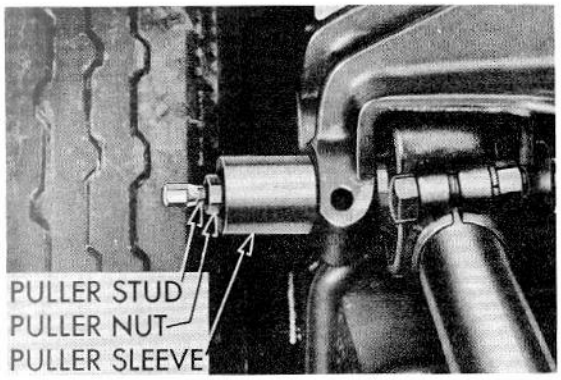
		x Indicates Tools Contained In DD-1089	DD-1131			x Indicates Tools Contained In DD-1089	DD-1131
DD-1090	Puller	x		DD-1096	Remover	x	
DD-1091	Puller	x	x	#1140	Case	x	x
DD-1092	Remover	x		DD-1138	Puller		x
DD-1093	Remover	x	x	DD-1139	Gauge	x	x
DD-1094	Puller	x	x	DD-1140	Remover	x	x
DD-1095	Remover	x					

These tandem axle tool sets save enough time and effort to make them a sound, worthwhile investment for shops and fleet owners who may only use them a few times each year. DD-1089 Tool Set provides necessary tandem axle tools to service other makes of trucks using same and similar TIMKEN rear axles as used in DODGE trucks.



DD-1091 TOOL REMOVES TORQUE ROD ENDS

This heat treated, fork type wedge is very effective for removing the upper torque rod as illustrated.

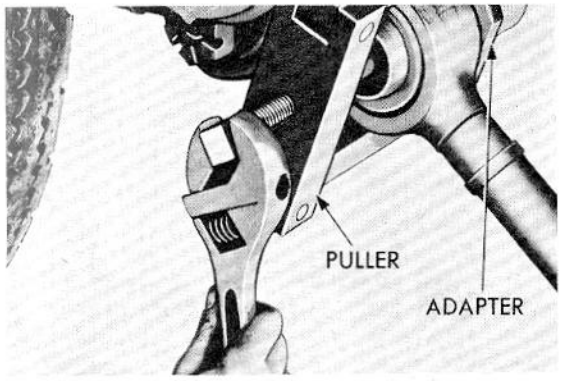


DD-1095 AND DD-1096 ADAPTERS REMOVE STRADDLE MOUNTED PINS FROM TIMKEN AXLES

(Not shown in use — See DD-1089 Tool Set Illustration above left for picture of these adapters.) Not required for servicing DODGE Trucks.

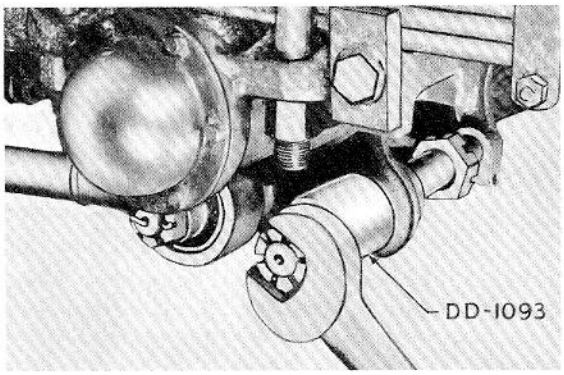
DD-1094 REMOVES TORQUE ROD PINS FROM FRAME BRACKETS

The threaded end of this special steel puller is installed in the upper torque rod pin and provides a simple and time-saving method of removing the torque rod.



DD-1090 AND DD-1138 PULLERS REMOVE LOWER TORQUE RODS—CONNECTING TUBE END

These rugged, heavy-duty, specialized pullers when equipped with a single puller plate is tool DD-1138 and is adaptable to all Timken tandem rear axles used on Dodge trucks. An extra puller plate, detail No. 6, may be added to this tool to service all Timken tandem rear axles. Puller complete with two adapter plates is identified by tool No. DD-1090.

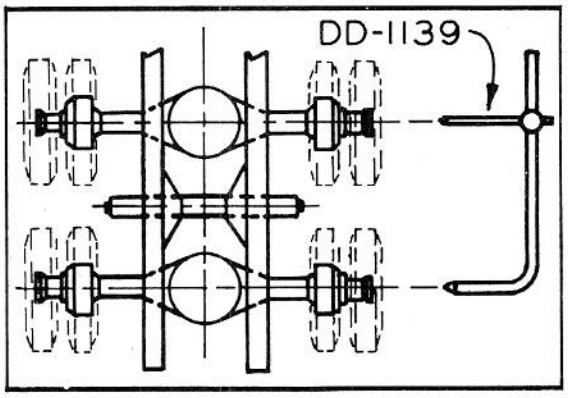


LOWER TORQUE ROD PIN REMOVERS—CONNECTING TUBE END

DD-1093 For ALL TIMKEN Tandem Rear Axles Including Those Used on DODGE Trucks.

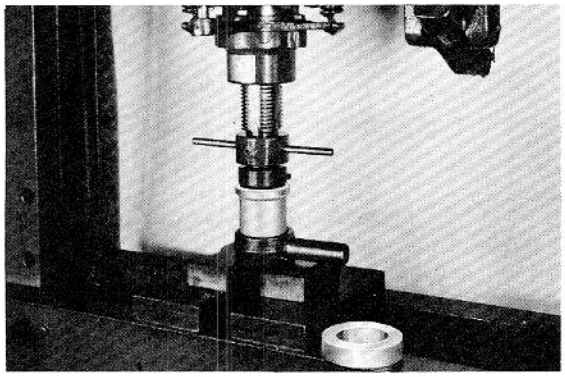
DD-1092 For Same Purpose For TIMKEN Tandem Rear Axles Only — Not Used on DODGE Trucks.

Each tool consists of a special sleeve as shown in DD-1089 illustration on opposite page. Pin is removed through use of pin nut tightened against sleeve as shown.



DD-1139 GAUGE CHECKS TANDEM AXLE ALIGNMENT

This simple tool makes it easy to check the parallel distance between the center lines of the two rear axle centers to be sure both sides are within the factory specifications. See actual illustration of tool in DD-1089 Illustration on opposite page.



DD-1140 REMOVES AND INSTALLS RUBBER BUSHINGS IN TORQUE ROD ENDS

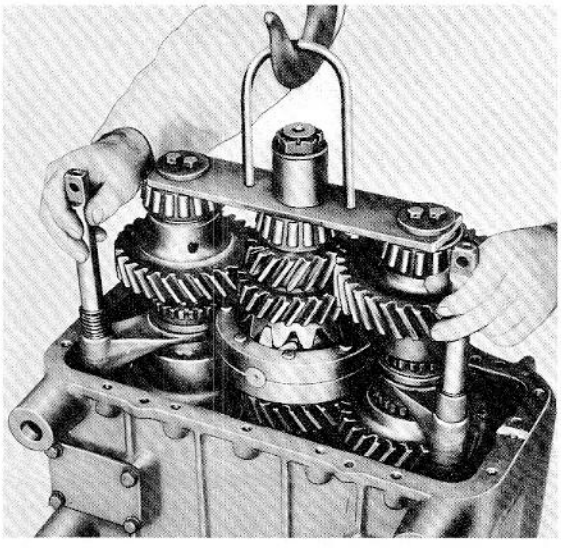
This pair of tools will serve all Timken tandem axles including those used on Dodge trucks.

NOT ILLUSTRATED

DD-1153 TANDEM AXLE, TORQUE ROD END, SPECIAL ASSEMBLY WASHER.

For ALL TIMKEN Axles Including Those Used on DODGE Trucks.

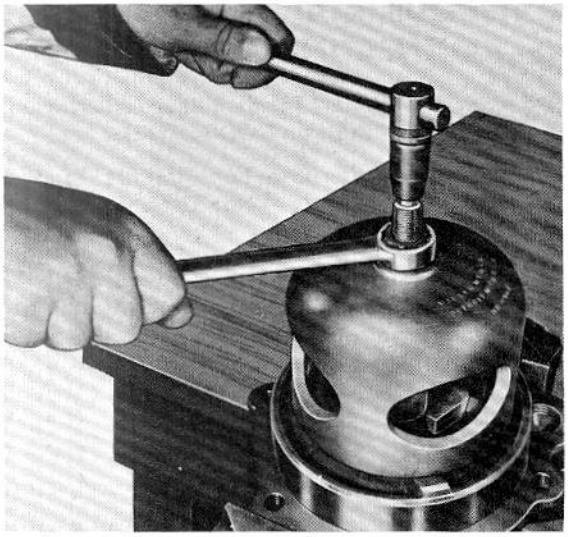
Rapid torque rod end and pin wear can be avoided by a tight fit of the torque rod ball end on the short tapered pin. These special heat treated washers have been designed for temporary assembly in place of the regular washer while the nut is tightened to 350 to 400 foot pounds. The DD-1153 washer is then removed and a standard washer assembled to same torque.



TORQUE DIVIDER GEAR TRAIN REMOVER AND INSTALLER

DD-1134 Used on All Six-Wheel DODGE Trucks Equipped With Torque Divider.

Ease and convenience of safely removing or installing a heavy gear train like this are valid reasons to justify the purchase of this special lifting fixture. Be sure your shop is properly equipped with this lifter to perform such heavy work safely.



BEARING CUP PULLER SET

DD-967 Set complete with Adapters 10, 11, 12, 13, 14 and 15 for pulling front and rear pinion bearing cups from cage, also differential cross shaft bearing cup from cap. For Dodge trucks equipped with Timken H, L and Q axles, also Eaton 1350, 16050 and 16500 axles.

Specialized bearing cup puller sets like these often mean hours of time saved over makeshift methods of removing these bearing cups with torches or hammer and chisel methods. Proper fitting adapters from these sets drop into place and quickly remove a damaged cup without any danger of damaging the often "hard to get" bearing cage or cap. You need only use special tools like these but a few times to more than save their modest cost.

DD-967 PULLER APPLICATION CHART

APPLICATION	Dodge trucks with Timken Hypoid H-100 axles	Dodge trucks with Timken Dbl. Red. and 2 Speed H-200 & H-300 axles	Dodge trucks with Timken Hypoid L-100 axles	Dodge trucks with Timken Hypoid Q-100 axles	Dodge trucks with Timken Dbl. Red. L-200 and 2 Speed L-300 axles	Dodge trucks with Timken Dbl. Red. Q-200 and 2 Speed Q-300 axles	Dodge trucks with Eaton 1350 axles	Dodge trucks with Eaton 16050 and 16500 axles
Remove Pinion Rear Cup from cage with Adapter.	13		14	15			12	12
Remove Pinion Front Cup from cage with Adapter.	13		14	15			12	12
Remove Differential Cross-Shaft cup from cap with Adapter.		10			10	11		

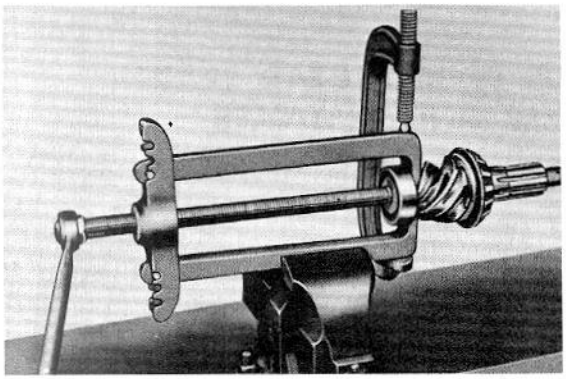
PINION PILOT BEARING INSTALLING SLEEVES

DD-950 For Dodge trucks equipped with Eaton 16050 and 16500 axles and Timken Hypoid H, L, and Q series axles.

DD-992 For Dodge trucks equipped with Eaton 1350 2 speed axles and Timken E and R-100 series axles.

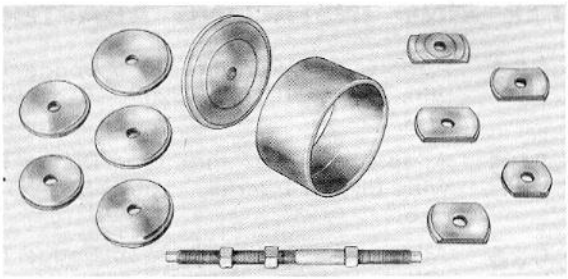
One single bearing broken when installed by makeshift methods would more than pay for these simple sleeves. Protect your service work and valuable parts by using the proper tool at the right time — it will pay you in time saved and customer good-will gained.

UTILITY PULLER FOR REMOVING PINION PILOT BEARING



C-549 For Dodge 1½ and 2 ton trucks with Eaton 1350-16050 and 16500 axles, 2½ and 3 ton trucks with Timken Hypoid axles, H-100, L-100 and Q-100. Also Timken E-100 and R-100 axles.

This heavy duty utility puller saves time and effort over makeshift methods of removing these bearings. Same puller is used to remove pinion flanges and yokes and a variety of other common service jobs. Every shop needs several rugged pullers like this. Supplied complete with clamp.



PINION AND DIFFERENTIAL CROSS SHAFT BEARING CUPS REMOVING AND INSTALLING TOOL SETS

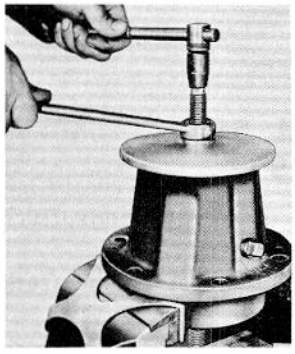
DD-966 Set with adapters 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 22, 23, 24 and 25 for Dodge Trucks with Timken H, L and Q and Eaton 1350, 16050 and 16500 axles.

Attempting to remove bearing cups with hammer punch not only takes too much valuable time but often causes unrepairable damage to the bearing cage or cap. Special puller sets like this save time and possible damage to parts.

DD-966 REMOVER AND INSTALLER APPLICATION CHART

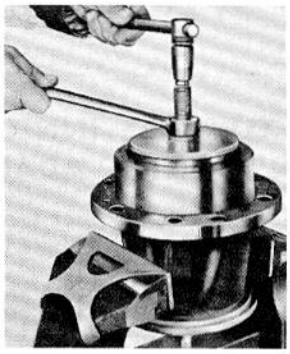
MODELS	PINION REAR BEARING CUP FROM CAGE		PINION FRONT BEARING CUP FROM CAGE		DIFFERENTIAL CROSS SHAFT BEARING CUP FROM CAP	DIFFERENTIAL CROSS SHAFT BEARING CUP FROM CARRIER	
	REMOVE	INST.	REM.	INST.	INSTALL	REM.	INST.
Dodge truck with Timken Hypoid H-100 axles.		23		23			
Dodge trucks with Timken Double Reduction H-200 and 2 speed H-300 axles.	16	17	14	15	17	17	17
Dodge trucks with Timken Hypoid L-100 axles.		24		24			
Dodge truck with Timken Double Reduction L-200 and 2 speed L-300 axles.	10	11	12	13	17	17	17
Dodge trucks with Timken Hypoid Q-100 axles.		25		25			
Dodge trucks with Timken Double Reduction Q-200 and 2 speed Q-300 axles.	10	11	18	19	11		
Dodge trucks with Eaton 1350, 16050 and 16500 axles.		22		22			

TYPICAL DD-966 BEARING CUP REMOVING AND INSTALLING JOBS



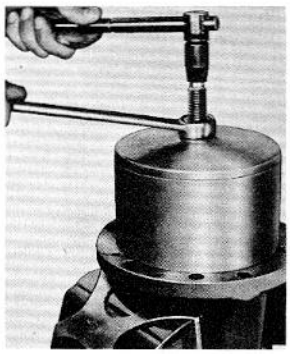
INSTALLING PINION FRONT CUP

The main puller screw has been assembled thru cage, proper adapter plate fits cup and top plate rests against machined face of cage.



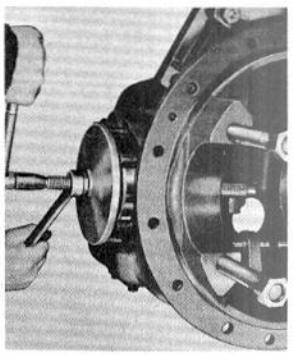
INSTALLING PINION REAR CUP

The tool is assembled with proper adapter plate as shown in application chart. Alignment is easily maintained by plates pressing against machined surfaces.



REMOVING PINION REAR CUP

The large cup type housing of the tool receives the bearing cup as it is pulled from pinion cage.



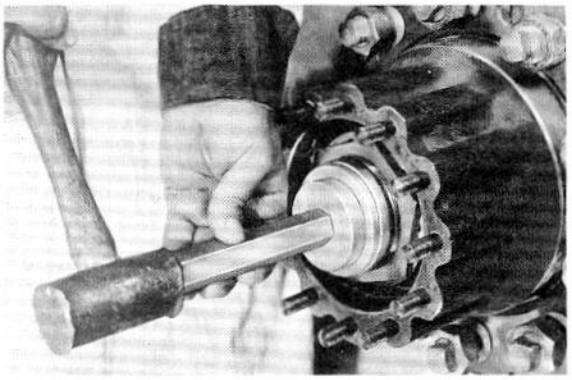
SERVICING CROSS SHAFT BEARING CUPS

There is no distortion and scrapping of expensive housings when cups are installed like this.

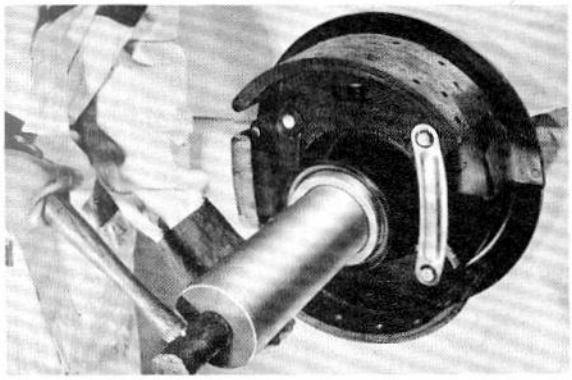
DD-930 DRIVING HANDLE is used with any or all of the Adapters listed at right. Be sure to order it as a separate item.

Only Two Driving Handles Needed To Use All Adapters Listed

Because of the variety of similar adapters required for safely installing these seals and wiper rings, the design of two common driver handles was possible. This type of tool design saves you money and the unnecessary duplication and storing of individual driving handles for each different size of adapter.



DD-930 DRIVING HANDLE is used with all of the Adapters listed at right. Be sure to order it as a separate item.



DD-940 DRIVING SLEEVE shown being used above is used with each of the adapters listed at right. Be sure to order it as a separate item.

WHEEL HUB INNER OIL SEAL AND WIPER RING INSTALLING ADAPTERS

DD-934 Adapter for 1947 thru 1956 Dodge Trucks with Timken H series axles. See DD-1085 also.

DD-935 Adapter for 1947 thru 1956 Dodge Trucks with Timken L series axles. See DD-1107 also.

DD-936 Adapter for 1947 thru 1956 Dodge Trucks with Timken Q series axles. Also Timken R series axles.

DD-968 Adapter for 1947 thru 1956 Dodge 1½ Ton, 2 and 2½ Ton Trucks equipped with Dodge and 16050 or 16500 Eaton axles.

DD-976 Adapter for Trucks equipped with Timken "S" Series Rear Axles.

DD-1085 Adapter for DODGE Trucks Equipped With TIMKEN "H" Axles with Late Type Seals.

DD-1107 Adapter for DODGE 3 Ton Trucks Equipped With TIMKEN "L" Series Rear Axles Using Late Type Inner Oil Seal No. A-1205-J-634.

DD-1156 Adapter for 1946 thru 1956 DODGE 1½ Ton Trucks equipped with Eaton 1350 axles.

DD-1227 Adapter for 1953 thru 1956 Dodge "K" model trucks.

AXLE TUBE OUTER OIL SEAL INSTALLING ADAPTERS

DD-931 Adapter for 1947 thru 1956 Dodge Trucks with Timken H series axles.

DD-932 Adapter for 1947 thru 1956 Dodge Trucks with Timken L series axles.

DD-974 Adapter for 1947 thru 1956 Dodge Trucks with Timken Q series axles. Also Timken R and S series axles.

AXLE TUBE INNER OIL SEAL INSTALLING ADAPTERS

DD-941 Adapter for 1947 thru 1956 Dodge Trucks with Timken H series axles.

DD-942 Adapter for 1947 thru 1956 Dodge Trucks with Timken L series axles.

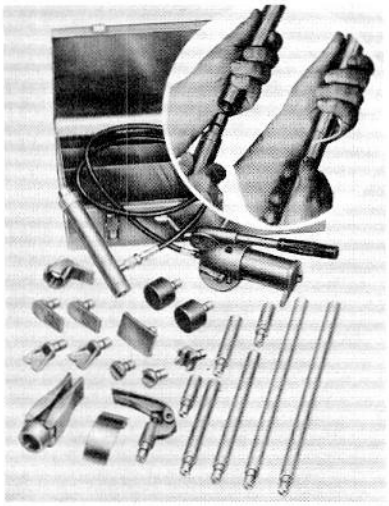
DD-943 Adapter for 1947 thru 1956 Dodge Trucks with Timken Q series axles.

DD-975 Adapter for Trucks equipped with Timken "S" Series Rear Axles.

DD-1106 Adapter for DODGE 3 ton Trucks Equipped With TIMKEN "L" Series Rear Axles Using Late Type Inner Oil Seal Wiper Ring No. 1199-V-1296.

MILLER Brings You the Latest BODY REPAIR TOOLS and EQUIPMENT

The body and fender repair equipment, illustrated on the next pages, will help your body shop turn out better and faster results without back-breaking effort. This will mean more profits for you — better service for your customers and more take-home pay for your men. The hydraulic power provides super-sensitive control and will usually increase efficiency, and quality of workmanship. Each body and fender repair problem has been carefully studied by sheet metal repair experts in cooperation with qualified hydraulic engineers to develop this proven line of modern, hydraulic powered, body repair tools.



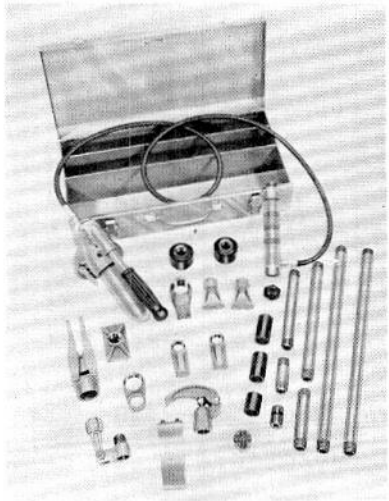
PF-8 CONVERSION UNIT

Converts Any 3/4" Threaded Unit To New Efficient EZ-E-ON Design

Any 3/4" threaded ram can be quickly converted to the NEW EZ-E-ON Attachments by the use of adapters included in unit. EZ-E-ON Attachments, same as shown in PF-7 above, cut "Hook-up" and "Take-down" time 70%. Simply "twist" and it's on—"twist" and it's off.

PF-8 UNIT CONTAINS:

- 2 SM-40 Ram Extension Toes
- 1 SM-41 Jack Base
- 1 SM-42 V-Notch Cap
- 2 SM-43 Rubber Heads
- 2 SM-44 Offset Spreading Toes
- 2 SM-49 Ram Caps
- 2 SM-50 20" Tube Extens'ns
- 1 SM-52 12" Tube Extension
- 2 SM-53 3" Tube Extensions
- 1 SM-55 5" Tube Extension
- 1 SM-58 8" Tube Extension
- 1 SM-80 Adjustable Spoon
- 1 MSL-21 Adapter
- 1 MSL-22 Adapter



PF-7 SPEED-MIDGET

Cuts Hook-Up and Take-Down TIME 70%

This Unit, powered by a 3-ton Remote Control Hydraulic Jack and equipped with the new, amazing EZ-E-ON connection, cuts hook-up time an average of more than 70%. This cuts labor costs and increases work capacity and profits over equipment that must be screwed together. Tests prove it possible to attach a 3" tube and rubber base in 11½ seconds — against 43 seconds for assembling a threaded-coupling. This unit, essential for every size body repair shop, provides a combination of rugged power and fast action that will turn in low-cost, high production body repairs.

UNIT CONTAINS:

- 1 SM-200 3-Ton Remote Control Jack, Complete
- 1 SM-42 V Notch Cap
- 2 SM-43 Rubber Heads
- 1 SM-75 Spreader
- 2 SM-40 Ram Extension Toes
- 2 SM-44 Offset Spreading Toes
- 1 SM-39 Jack Body Toe
- 1 SM-41 Jack Base
- 1 SM-80 Adjustable Spoon
- 2 SM-49 Ram Caps
- 1 SM-58 8" Tube Extension
- 2 SM-53 3" Tube Extensions
- 1 SM-52 12" Tube Extension
- 1 SM-55 5" Tube Extension
- 2 SM-50 20" Tube Extensions
- 1 SM-98 Tool Box

PF-1 HYDRO-MIDGET UNIT

Compact, Portable, Power Tool Set

Here is a combination of power tools, expertly "teamed" and readily portable in a compact metal carrying case. The extensions and 3/4" attachments of this unit, based on the 3-ton power of the Hydro-Midget Jack, increase speed and profits in all body and fender repair.

UNIT PF-2 Same as Unit PF-1 with *Tool-Along instead of Carrying Case.

* The P-F Tool-Along is a "helper-on-wheels" that takes all of the tools to car side. Sturdy steel construction with red and gray enamel, the Tool-Along has three tray shelves, lockable drawer and side racks for hammers and pick tools. Equipped with the popular "Upsi-Dazy" casters.

UNIT PF-3 Same as PF-1 but with Speedlok Tubing instead of regular Threaded Tubing.

UNIT PF-4 Same as PF-2 but with Speedlok Tubing instead of regular Threaded Tubing.

UNIT CONTAINS:

- 1 BU-200 Remote Control 3-ton Jack, Complete
- 1 BU-37 Pull Arm Guide
- 1 BU-38 Pull Arm Base Assembly
- 1 BU-39 Jack Body Toe
- 2 BU-40 Ram Extension Toes
- 1 BU-41 Jack Base
- 1 BU-42 V Notch Cap
- 2 BU-43 Rubber Bases
- 2 BU-44 Offset Spreading Toes
- 1 BU-45 Ram Base Plug
- 1 BU-46 Short Nipple
- 1 BU-47 Short Coupling
- 2 BU-48 Long Couplings
- 2 BU-50 20" Tube Extensions
- 1 BU-52 12" Tube Extension
- 1 BU-53 3" Tube Extension
- 1 BU-55 5" Tube Extension
- 1 BU-58 8" Tube Extension
- 1 BU-75 Spreader
- 1 BU-80 Adjustable Spoon Assembly
- 1 BU-98 Carrying Case

PF-41 HYDRO-CHIEF UNIT

Rugged, Super Power for Those Tough Jobs

This compact unit is powered by the BU-400 7½-Ton Remote Control Jack, with standard 1¼" strong steel tubing. It contains a complete matching assortment of attachments, adjustable Spoon and sturdy Tool Box.

UNIT PF-42 Same as Unit PF-41, with *Tool-Along instead of Tool Box.

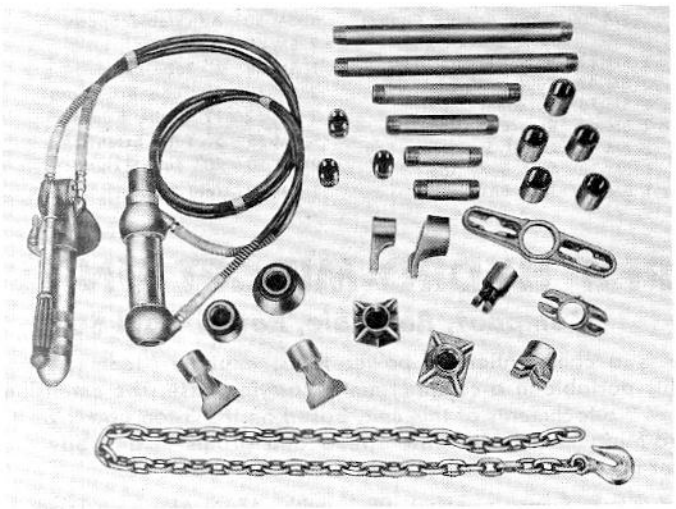
* The P-F Tool-Along is a "helper-on-wheels" that takes all of the tools to car side. Sturdy steel construction with red and gray enamel, the Tool-Along has three tray shelves, lockable drawer and side racks for hammers and pick tools. Equipped with the popular "Upsi-Dazy" casters.

UNIT PF-43 Same as PF-41, but with Speedlok Tubing, connectors, pins, adapters, instead of Standard Threaded Tubing.

UNIT PF-44 Same as PF-42, but with Speedlok Tubing, connectors, pins, adapters, instead of Standard Threaded Tubing.

UNIT CONTAINS:

1 BU-90 Tool Box
1 BU-238 Pull Arm Assembly
1 BU-400 7½-Ton Remote Control Jack
1 BU-380 Adjustable Spoon Assembly
1 BU-580 Jack Base
1 BU-585 Ram Base Plug
1 BU-700 Large Rubber Base
1 BU-705 Small Rubber Base
3 BU-725 Short Nipples
1 BU-726 5" Tube Extension
1 BU-727 6" Tube Extension
1 BU-728 8" Tube Extension
1 BU-729 12" Tube Extension
2 BU-730 20" Tube Extensions
5 BU-731 Heavy Duty Couplings
1 BU-775 Pull Arm Guide
1 BU-904 Jack Body Nesting Toe
1 BU-905 Push-Pull Nesting Toe



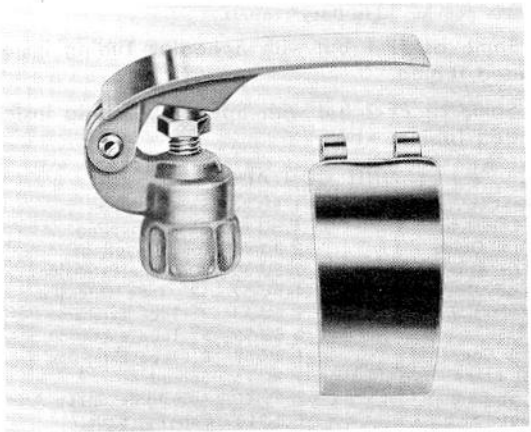
PF-61 HYDRO-GIANT BODY and FRAME UNIT

The Choice for Heavy Duty Work

A combination of heavy duty extensions and sturdy attachments. Powered with the BU-500 12½-Ton Push-Pull Jack for heavy-body and light-frame work.

UNIT CONTAINS:

1 BU-500 12½-Ton Push-Pull Remote Control Jack, Complete
1 BU-580 Jack Base
1 BU-700 Large Rubber Base
1 BU-705 Small Rubber Base
3 BU-725 Short Nipples
5 BU-731 Heavy Duty Couplings
1 BU-904 Jack Body Nesting Toe
1 BU-905 Push-Pull Nesting Toe
1 BU-906 90° Pushing Cap
2 BU-907 Offset Spreading Toes
1 BU-909 Large Chain Pull Attachment
1 BU-910 Small Chain Pull Attachment
1 BU-911 6' Chain—⅜"
1 BU-913 Heavy Duty V Notch Cap
1 BU-917 9" Heavy Duty Tube Extension
1 BU-919 Swivel Chain Hook
1 BU-920 5" Heavy Duty Tube Extension
1 BU-921 6" Heavy Duty Tube Extension
1 BU-922 12" Heavy Duty Tube Extension
2 BU-923 20" Heavy Duty Tube Extensions



PF ADJUSTABLE SPOONS

BU-80 HYDRO-MIDGET FOR ¾" THREAD

For use with ¾" tubing attachments and BU-200 3-ton Jack.

BU-380 STANDARD FOR 1¼" THREAD

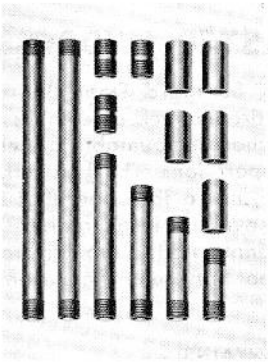
For use with 5, 7½ and 12½-ton Jacks and fits standard threaded tubing or, with suitable connector, the Speedlok Tubing. It is proportionately larger than the BU-80.

SM-80 MIDGET FOR SPEED-MIDGET UNITS

For use with SM-200 3-ton Remote Control Jack. Is included in PF-7 Set.

These special spoons are precision made with a highly polished, adjustable surface to take over the duties of several fixed-angle spoons. Bumping angle can be changed without changing adapter, or removing spoon from job. Attaches directly to threaded tubing or jack. The crowned hexagonal adjusting screw moves the spoon up or down to the exact needed contour.

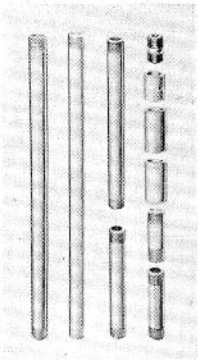
PF-135 STANDARD TUBING SET



An expert selection of threaded tubing for use with the 5 and 7½-Ton Jacks. 1¼" standard pipe thread.

3 BU-725 Short Nipples
1 BU-726 5" Tube Extension
1 BU-727 6" Tube Extension
1 BU-728 8" Tube Extension
1 BU-729 12" Tube Extension
2 BU-730 20" Tube Extensions
5 BU-731 Heavy Duty Couplings

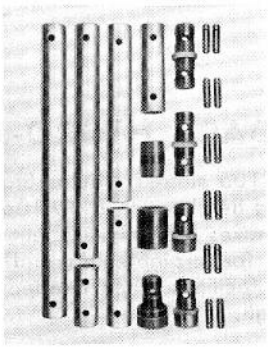
PF-138 HYDRO-MIDGET TUBING SET



Threaded tubing and connectors for use with the Hydro-Midget 3-Ton Jack, ¾" standard pipe thread.

1 BU-46 Short Nipple
1 BU-47 Short Coupling
2 BU-48 Long Couplings
2 BU-50 20" Tube Extensions
1 BU-52 12" Tube Extension
1 BU-53 3" Tube Extension
1 BU-55 5" Tube Extension
1 BU-58 8" Tube Extension

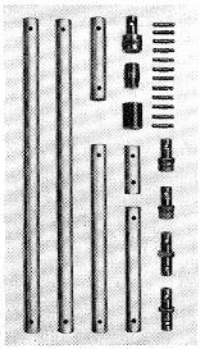
PF-137 SPEEDLOK TUBING SET



Time-saving Speedlok tubing and connectors for use with 5 and 7½-Ton Jacks. Adapters included for connecting to standard threaded tubing and attachments.

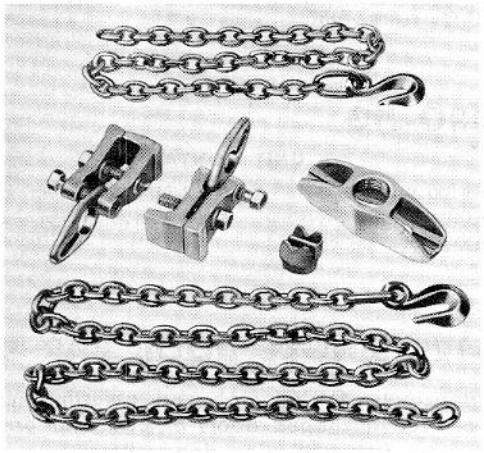
1 BU-725 Short Nipple
1 BU-731 Heavy Duty Coupling
2 SL-1 Male Threaded Adapters
1 SL-2 Female Threaded Adapter
1 SL-4 4" Speedlok Tube Extension
1 SL-6 6" Speedlok Tube Extension
12 SL-7 Pins
1 SL-8 8" Speedlok Tube Extension
2 SL-9 Connectors
1 SL-12 12" Speedlok Tube Extension
1 SL-16 16" Speedlok Tube Extension
1 SL-20 20" Speedlok Tube Extension

PF-139 HYDRO-SPEEDLOK TUBING SET



Time-saving Speedlok tubing and connectors for the Hydro-Midget 3-Ton Jack. Includes adapters for use with threaded tubing and attachments.

1 BU-46 Short Nipple
1 BU-47 Short Coupling
2 MSL-1 Male Threaded Adapters
1 MSL-2 Female Threaded Adapter
1 MSL-3 3" Speedlok Tube Extension
1 MSL-5 5" Speedlok Tube Extension
12 MSL-7 Pins
1 MSL-8 8" Speedlok Tube Extension
2 MSL-9 Connectors
1 MSL-12 12" Speedlok Tube Extension
2 MSL-20 20" Speedlok Tube Extensions



PULL KITS

PF-151 HYDRO-MIDGET PULL KIT

This Kit provides fast, simple and positive hook-up for all pulling operations. The "Bite-Tite" Clamps with reversible jaw feature can be mounted on any part of the car. The Chain Pull Collar is available with special threads to fit other Midget-type rams.

UNIT CONTAINS:

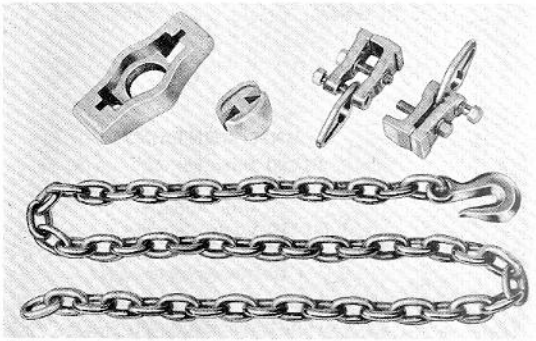
1 BU-42 V Notch Cap
2 BU-186 6' Chains—¼"
1 BU-187 Chain Pull Collar
2 BU-190 Bite-Tite Clamp Assemblies

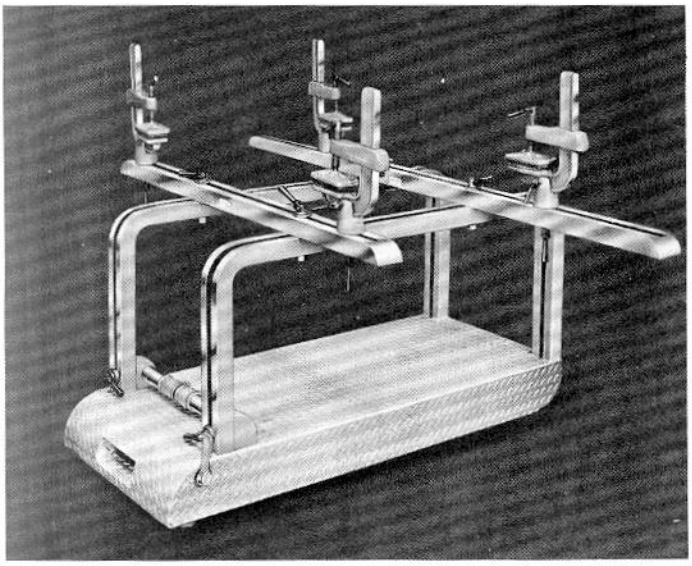
PF-152 STANDARD PULL KIT

A notable engineering design advance in demountable panel or frame repair operations with hydraulic power. The "Bite-Tite" Clamps, with reversible jaw feature, hold firmly to panels without damaging, while stretching them back to "final-finishing" shape. The Chains, Chain Pull Head, and Chain Pull Collar afford many different set-ups.

UNIT CONTAINS:

1 BU-287 Chain Pull Collar
1 BU-288 Chain Pull Head
2 BU-190 Bite-Tite Clamp Assemblies
1 BU-911 6' Chain—⅜"



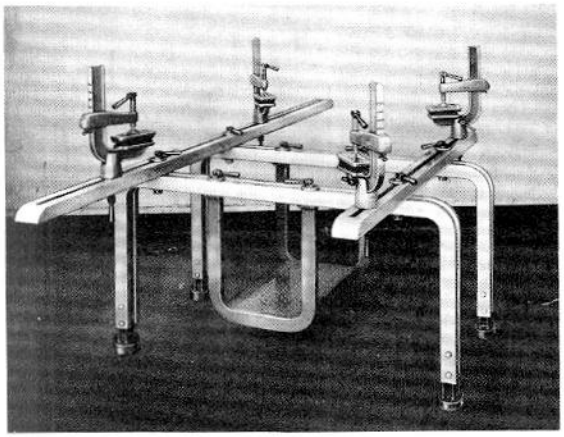


PF-126 MASTER HYDRO-JIG

A movable unit with Standard Door Bar and long Pull Bar to add to hydraulic jack assemblies for door, hood, deck lid and other demountable panel straightening and finishing operations. The box base is reinforced diamond plate, has a foot operated brake for rigidity in use, and moves on large rubber-tired ball-bearing casters. Full-length slotted tubular Stands, with maximum jacking area between. Dimensions: 24" x 56" x 29½" high.

UNIT CONTAINS:

1 BU-4 Hydro-Jig Chassis
1 BU-100 Door Bar 52"
4 BU-101 Bar Bolt Assemblies
1 BU-104 Pull Bar 90"
4 BU-125 Clamps with Adapters



PF-127 STANDARD HYDRO-JIG

Combining a pair of BU-105 slotted tubular Stands, adjustable to handy working height, with a BU-106 Jacking Platform, this assembly makes a highly efficient unit with Door Bar, and Pull Bar, for straightening and finishing operations, with jacking facilities when needed. Dimensions: 53" x 55" x 33" high.

UNIT CONTAINS:

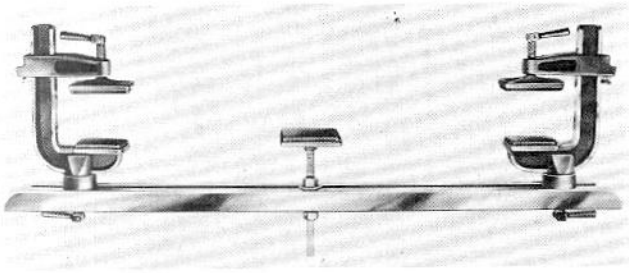
1 BU-100 Door Bar 52"
4 BU-101 Bar Bolt Assemblies
1 BU-104 Pull Bar 90"
2 BU-105 Holding Stands
1 BU-106 Jacking Platform
4 BU-125 Clamps with Adapters

PF-128 BASIC HYDRO-JIG

This assembly is the same as PF-127 (above), but without Jacking Platform; provides a flexible and convenient holding unit for stretching and finishing operations on demountable panels.

UNIT CONTAINS:

1 BU-100 Door Bar 52"
4 BU-101 Bar Bolt Assemblies
1 BU-104 Pull Bar 90"
2 BU-105 Holding Stands
4 BU-125 Clamps with Adapters

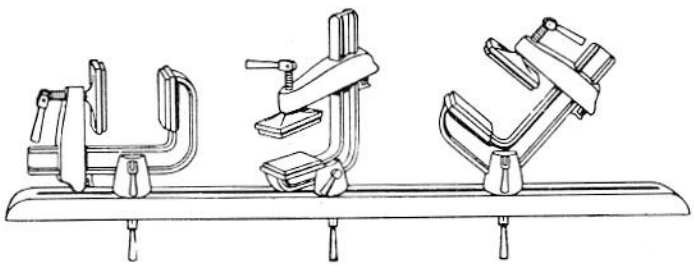


UNIT CONTAINS:

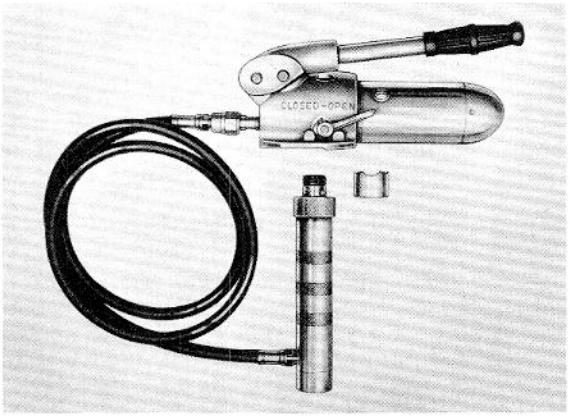
1 BU-100 Door Bar 52"
2 BU-125 Adjustable Clamps with Adapters
1 BU-110 Center Support

PF-129 SINGLE DOOR BAR UNIT

Used principally for aligning and adjusting moderate-sized or regular shaped doors of past and present car models; also for re-aligning door pillars.

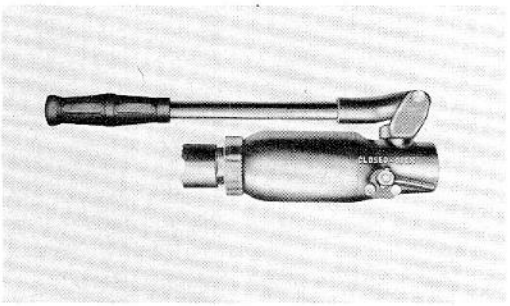


A Double Door Bar Unit, using two PF-129's, is often required to obtain increased pressure at outer edge of large, wide doors.



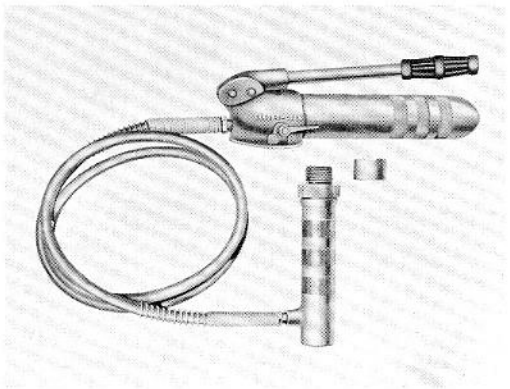
BU-200 HYDRO-MIDGET REMOTE CONTROL, ALL-POSITION 3-TON JACK

An efficient power plant that speeds the job by linking up quickly with attachments, with self-retracting ram and finger-tip valve control. It is precision engineered and manufactured to perform every detail of the job quickly, easily and profitably. Accomplishes a broad range of body work efficiently. Famous SPEEDLOK Tubing, available for this jack, snaps together, cuts assembly time way down.



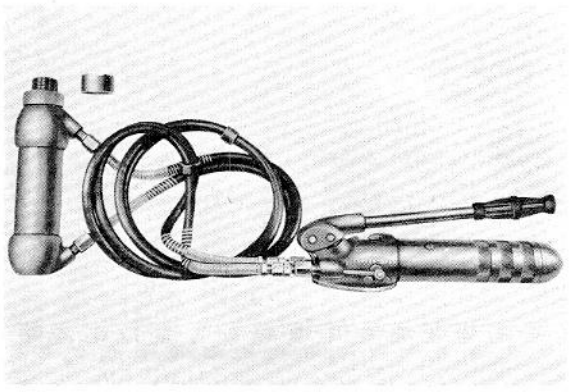
BU-300 5-TON DIRECT ACTION, ALL-POSITION HYDRAULIC JACK

The exclusive and outstanding feature of this powerful, compact direct-action jack is its ability to operate in any position whatever. It takes all standard attachments, and the swivel handle permits pumping in any convenient position.



BU-400 7½-TON REMOTE CONTROL, ALL-POSITION HYDRAULIC JACK

This is the all-around body jack of the industry. A fast, superior product to handle any body and fender repair — car and light truck frames as well. All standard attachments fit this jack, which for its power is both fast and lightweight. Self-retracting ram and finger-tip valve control.



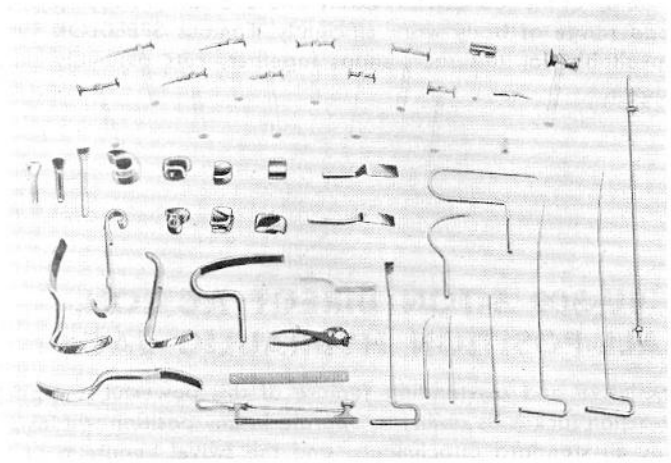
BU-500 12½-TON PUSH-PULL REMOTE CONTROL HYDRAULIC JACK

A push-pull Jack with 12½-ton capacity on direct push — all you need on heavy-body and light frame work, plus 7½ ton of direct pull force. It is all-position useful, with instantaneous single-lever valve control, and self-retracting ram.

BODY and FENDER REPAIR TOOL SETS

The hand tools illustrated below were designed by a nationally famous expert body and fender repair man, to match original body designs and to provide higher standards in body repair methods. They have earned top rating throughout the automotive service industry and are essential to assure top-quality work at the lowest cost. Every body shop and sheet metal repairman needs a generous assortment of these money making tools.

UNIT HT-1 MASTER HAND TOOL SET



The HT-1 unit comprises a complete assortment of hand tools, including all hammers, dolly blocks, finishing spoons, pick tools, and Power Tools for car dealer body shops and the sheet metal expert. The working faces are precision ground and made from high grade alloy steel

UNIT CONTAINS 42 PIECES

Hammers

- BH-2 Fender Hammer 5" Bullet Type
- BH-4 Bumping Hammer
- BH-5 Square Face, Taper Shank Bead and Molding Hammer
- BH-6 Bumping Hammer
- BH-7 Round Face and Pointed Shank Pick and Surfacing Hammer
- BH-8 Combination Offset Square Face and Cross Peen Bumping Hammer
- BH-11 High and Low Crown Finishing Hammer
- BH-12 Serrated Face Hammer
- BH-14 Round Head and Extra Long Pick Hammer
- RH-15 Heavy Duty Roughing Hammer with All-Purpose Dolly Block
- MH-1 Magnetic Trim Hammer
- WM-5 Lignum Vitae Bumping and Shrinking Mallet

Pick Tools

- PT-1 Curved Pick, Short
- PT-2 Deep Throat Straight Pick
- PT-4 Top Rail Pick
- PT-5 Curved Pick, Long
- PT-8 Long Tee Handle Chisel Bit Pick
- FP-2 Curved Finishing Punch
- FP-3 Hooked Finishing Punch
- FP-5 Piercing Punch

Dollies

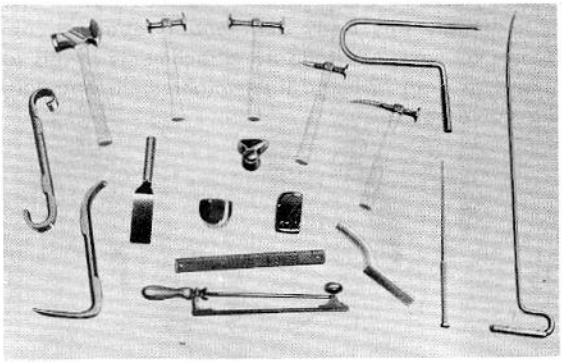
- GD-1 Low Crown General Purpose Bumping Dolly
- GD-3 High Crown Dolly Block
- GD-4 Heavy Duty Roughing Dolly Block
- GD-5 Shrinking Dolly Block
- GD-6 Finger Dolly Block
- GD-7 General Purpose Rail Type Dolly
- GD-8 Heel Dolly

Spoons

- A-6 Double End Lower Back Panel and Quarter Panel Spoon
- B-3 Double End Door and Side Apron Spoon
- D-1 Special Door and Side Panel Spoon
- E-6 Surfacing Spoon
- E-8 Low Crown Radius Surfacing Spoon
- F-2 Double End Heavy Duty Driving Spoon
- F-3 Double End Heavy Duty Driving and Fender Beading Tool
- JWC-3 Caulking Iron
- JWC-4 High Crown Caulking Iron
- WC-2 Wide Caulking Iron

Miscellaneous

- DMP-12 Drip Molding Pliers
- FH-14 Flexible Adjustable File Holder
- F-14-8 Flat File Blade
- BT-37 Body Tram Checking Gauge with Scribe
- SP-3 Flat Face Solder Paddle



UNIT HT-2 STANDARD HAND TOOL SET

Hammers

- BH-2 Fender Hammer 5" Bullet Type
- BH-6 Bumping Hammer
- BH-7 Round Face and Pointed Shank Pick and Surfacing Hammer
- BH-12 Serrated Face Hammer
- RH-15 Heavy Duty Roughing Hammer with All-Purpose Dolly Block

Dollies

- GD-3 High Crown Dolly Block
- GD-7 General Purpose Rail Type Dolly
- GD-8 Heel Dolly

Pick Tools

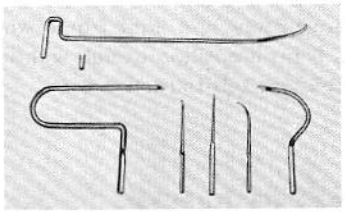
- PT-2 Deep Throat Straight Pick
- PT-5 Curved Pick, Long
- FP-5 Piercing Punch

Spoons

- E-8 Low Crown Radius Surfacing Spoon
- F-2 Double End Heavy Duty Driving Spoon
- F-3 Double End Heavy Duty Driving and Fender Beading Tool

Miscellaneous

- FH-14 Flexible Adjustable File Holder
- F-14-8 Flat File Blade
- SP-3 Flat Face Solder Paddle



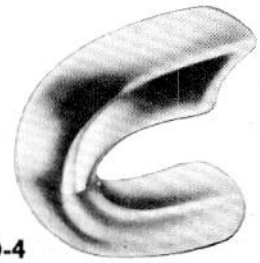
UNIT HT-3 PICK TOOL SET

CONTAINS 6 PIECES

- PT-2 Deep Throat Straight Pick
- PT-4 Top Rail Pick
- PT-5 Curved Pick, Long
- FP-2 Curved Finishing Punch
- FP-3 Hooked Finishing Punch
- FP-5 Piercing Punch

DOLLY BLOCKS

Dolly blocks, Spoons and Hammers work in harmony to restore original lines, and are designed to represent the utmost in research, experiment, and tool engineering skill.



GD-4

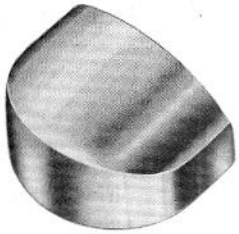
GD-4 HEAVY DUTY ROUGHING DOLLY BLOCK — Hammers out shallow dents, extra backing for rough hammering, drop-forged, heat-treated, precision polished. Weight 5 lbs., 5 oz.

GD-5

GD-5 SHRINKING DOLLY BLOCK — Nine contour combinations for hot shrinkage. Wide and narrow trenching grooves. Weight 2 lbs., 7 oz.

GD-7

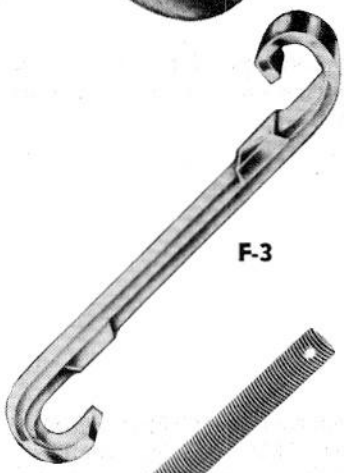
GD-7 GENERAL-PURPOSE RAIL TYPE DOLLY — Many time-saving contours, drop-forged, alloy steel, heat-treated, precision polished. Weight 3 lbs., 3 oz.



GD-8

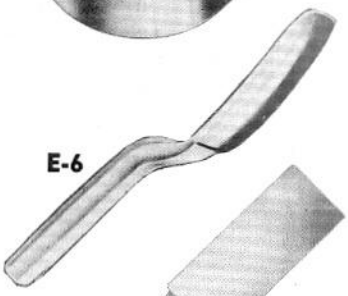
GD-8 HEEL DOLLY — For fender fins, around headlight inset, right angle section corners. Drop-forged, heat-treated. Weight 2 lbs., 8 oz.

SPOONS — Polished Surface



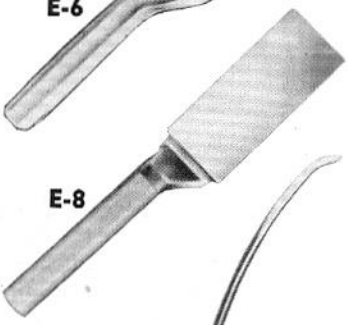
F-3

F-3 DOUBLE END HEAVY DUTY DRIVING AND FENDER BEADING TOOL — For straightening reverse beads on fenders — non-wire flanged edges, alligator hood reversed flanges. Aligns inner construction on body panels. Weight 3 lbs., 6 oz.



E-6

E-6 SURFACING SPOON — Spring hammering operations with mallet or bumping hammer. Used for surface metal finishing, fender repair, high crown areas. Weight 1 lb., 6 oz.



E-8

E-8 LOW CROWN RADIUS SURFACING SPOON — Light, efficient, economical. Radius on face for low crown surfaces hammering. Weight 8 oz.

BODY FINISHING FILE BLADES

F-14-S
F-14-7
FH-14-8

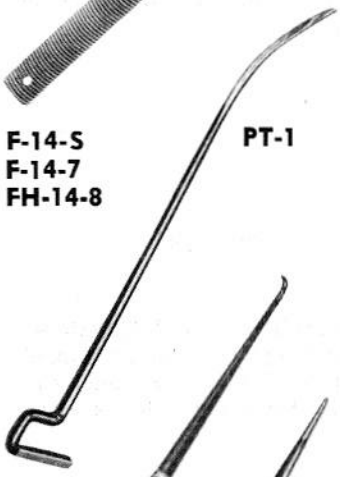
F-14-7 FLAT FILE BLADE. A top-quality, 14" long, flexible, milled, curved tooth file. Gives planing action and moves chips out of the way. 7 teeth to the inch. Comes in an individual rivet sealed envelope that assures buyer against the substitution of inferior or re-sharpened files.

FH-14-8 FLAT FILE BLADE — Same as above but with 8 teeth per inch.

F-14-S HALF ROUND FILE — Same as above but with half-round surface. For use on concave surfaces such as rear fenders, quarter panels, hoods and around headlamps.

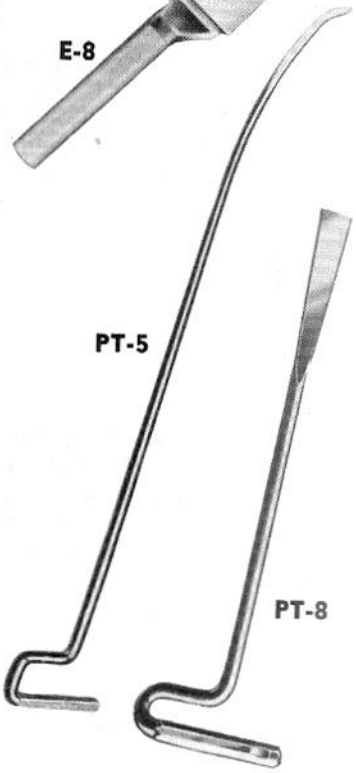
PICKS and PUNCHES

These special pick finishing tools cut body repair finishing time up to 50%. Pointed types for inner construction and outer panel clearance and flat end picks for clearances under 2".



PT-1

PT-1 CURVED PICK, SHORT — For inner construction of lower frame work. Turning handle to force out small damaged areas. Weight 1 lb., 14 oz.



PT-5

PT-8

PT-5 CURVED PICK, LONG — Same as PT-1. 28" shank for greater reach. Makes removal of trim and inner construction unnecessary in many minor repairs. Weight 2 lbs., 5 oz.

PT-8 LONG TEE HANDLE CHISEL BIT PICK — Long reaching picking as in modern quarter panels. Weight 1 lb., 13 oz.

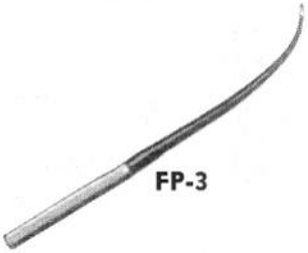
FP-2

FP-2 CURVED FINISHING PUNCH — Used where an offset blow is needed, such as around pillars in upper reveal. Weight 7 oz.

FP-3 HOOKED FINISHING PUNCH — For window reveal panels of door and body and trunk lid work. Curved design for deep inner construction. Weight 7 oz.

FP-5

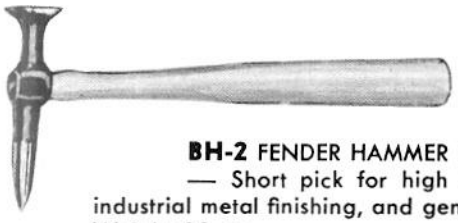
FP-5 PIERCING PUNCH — For low spots deep into modern inner construction. Weight 11 oz.



FP-3

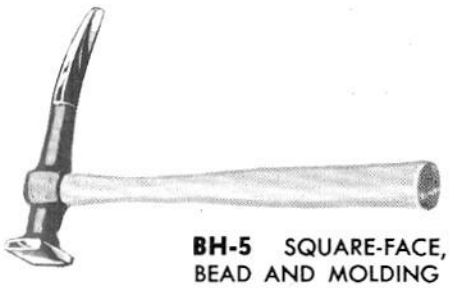
HAMMERS — A special type for every need

RH-15 HEAVY DUTY ROUGHING HAMMER WITH ALL-PURPOSE DOLLY BLOCK — Used in tight places. Well-balanced, concentrated weight. Weight 3 lbs., 5 oz.

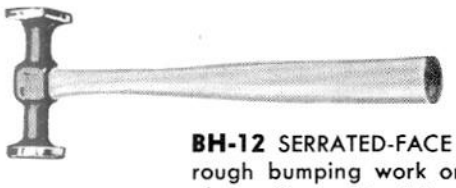


BH-2 FENDER HAMMER 5" BULLET TYPE — Short pick for high crown fenders, industrial metal finishing, and general ding work. Weight 12 oz.

BH-7 ROUND FACE AND POINTED SHANK PICK AND SURFACING HAMMER — Pointed shank curved to reach inner construction, and for picking through sound insulation in body panels. Weight 13 oz.



BH-5 SQUARE-FACE, TAPER-SHANK BEAD AND MOLDING HAMMER — For reshaping all beads, moldings, headlamp inset reveals and louvers. Wide chisel face for rapid pick surfacing in large areas. Weight 1 lb.



BH-12 SERRATED-FACE HAMMER — For rough bumping work on high and low crown surfaces. Serrated striking face.

WM-5 LIGNUM VITAE BUMPING MALLET — For hot metal shrinkage and work on painted surfaces. Will not chip under ordinary usage.

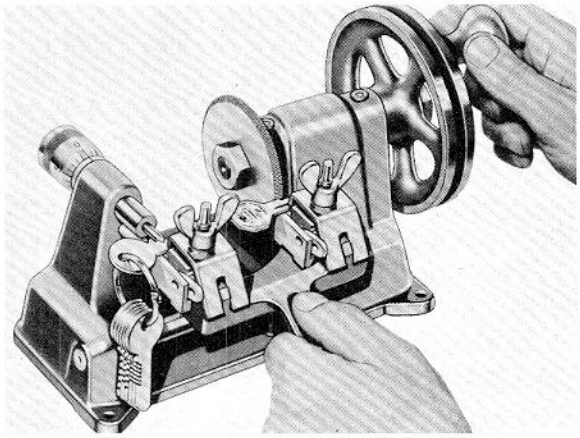
BH-4 BUMPING HAMMER (4") — A basic body tool. 1 3/8" square face and 1 9/16" round face.

BH-6 BUMPING HAMMER (6") — A perfect balance and the most useful of all heavy body hammers.

BH-8 COMBINATION OFFSET SQUARE FACE AND CROSS PEEN BUMPING HAMMER — Face affords clearance without danger of striking adjoining panels. High crown cross peen face is for deep and narrow panels and return contours.

MH-1 MAGNETIC TRIM HAMMER — Removes and replaces trim and upholstery. Picks up and drives trim tacks and brads with magnetized face. Forged claw for removing tacks.

BH-11 HIGH AND LOW CROWN FINISHING HAMMER — For fine finish hammering and high quality work. Weight 15 oz.



UNIVERSAL AUTOMOTIVE KEY CUTTING MACHINE

MTB-80774 For All Popular Automotive Keys.

LOW PRICED — EASILY USED AND KEPT UP-TO-DATE

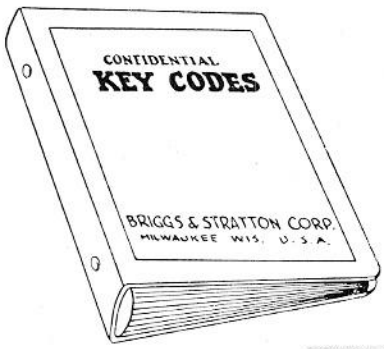
Immediate, accurate key service is an added "plus" service that can do much to build good will among your service customers. To make key service profitable, accurate, easy-to-use equipment is essential. This machine meets both of these requirements. It is designed, built and serviced by a leading original lock manufacturer for use in automotive service shops. Can be operated by hand, or powered with any small motor.

ACCURATELY DUPLICATES ORIGINAL KEYS OR CUTS NEW KEYS TO CODE WHEN ORIGINAL IS LOST

Most key service requires duplication of present keys from the broken or damaged original. Duplication is simple with this machine — the original is clamped in left hand jig. By holding the original key against the guide anvil, the new blank is automatically cut to the correct shape. Cutting keys from code is almost as simple by following the instructions in the key code manual supplied with each machine.

SERVICES WIDE VARIETY OF POPULAR KEYS

BRIGGS & STRATTON: 5 Tumbler Single Bitted—6 Tumbler Double Bitted —6 Tumbler Side Bar—Small Pin Tumbler—Large Pin Tumbler.
CHICAGO: Single Bitted—Double Bitted (duplicates only).
HURD: Small Pin—Medium Pin—Large Pin.
MILLER: 5 Tumbler Single Bitted (Yale Jr.).
YALE & TOWNE: 5 Tumbler Single Bitted (Yale Jr.)—Yale Small Pin—Yale Large Pin—Yale Omega (Wafer Tumblers with offset blank).



COMPLETE CODE SERVICE

A manual of confidential key codes is supplied with each machine. Its use makes it easy to find the correct key code for doors, ignition, glove compartment, trunk, etc. All codes are carefully indexed for prompt, accurate reference.

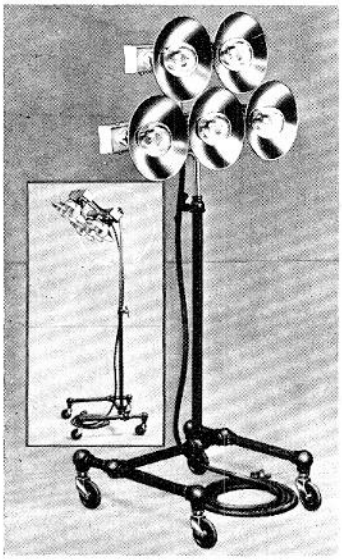
GUN SPRAYS
RAYON
SILK
FELT
AND
WOOL
FLOCK

FLOCK SPRAY GUN

C-3000 Capacity 2 quarts — extra glass container available separately.

AN ESSENTIAL TOOL FOR RECONDITIONING USED CARS.

Amazing reconditioning results can be obtained by using this special gun to apply rayon, felt, silk or wool flock to used car trunks, carpets, glove boxes, etc. Gun efficiently and uniformly applies short — fine — long or coarse flock fibers without clogging, yet with sufficient velocity to firmly imbed them in the flock adhesive. Gun operates on only 35 lbs. air pressure.



INFRA-RED RAY PAINT DRYING UNITS

C-817 Five light Unit with 7⅝" polished Aluminum reflectors and 5—250 watt G-25 lamps.

C-818 Five light Unit with 10¼" polished Aluminum reflectors and 5—250 watt PS-30 lamps.

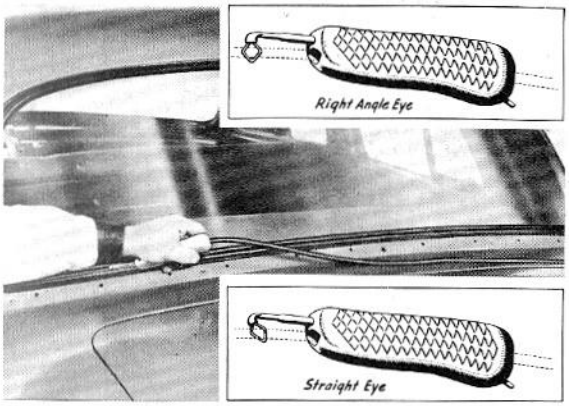
C-819 Thirteen light Unit with 7⅝" polished Aluminum reflectors and 13—250 watt G-25 lamps.

C-820 Infra-Red Ray Lamp only, 250 watt, 110 volt, 3¾" dia. x 7¾" overall. (PS-30).

C-821 Infra-Red Ray Lamp only, 250 watt, 110 volt, 3⅛" dia. x 5⅛" overall. (G-25).

CONCENTRATES PENETRATING HEAT FOR WIDE VARIETY OF CURING JOBS — ALSO IDEAL FOR SAFELY EXPANDING PRESS FIT GEARS, BEARINGS, ETC.

Portable drying units like these will save hours of time and help produce quality touch-up and spot refinishing. Because infra-red rays penetrate instead of reflect, these units have no appreciable heat loss.



WEATHER STRIP RETAINER INSTALLING TOOLS

C-3412 Right Angle Style—for 1953 and 1954 Plymouth, Dodge, DeSoto and Chrysler models using large filler strip.

SP-2670 Replacement eye only.

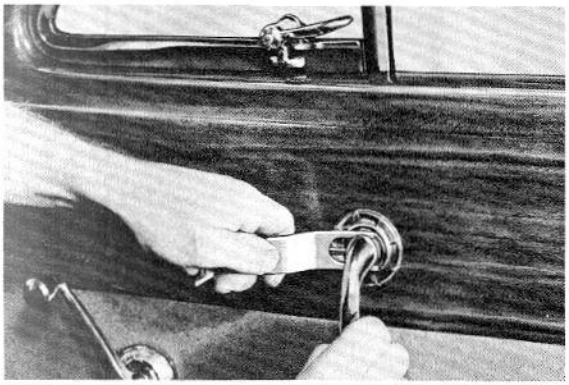
C-3144 Right Angle Style—for small size filler strip on earlier models.

SP-1787 Right Angle replacement eye only.

C-895 Straight Eye Style—for small size filler strips.

SP-1846 Straight Style replacement eye only.

These tools will save a great deal of time and avoid serious and annoying delays in installing these important weatherseal locking strips. Strip feeds through the handle of the tool into the eye which is drawn through the weather strip opening. This lays the locking strip into position with a minimum of effort. The combination of the straight and right angle eye tools allows a selection of the best tool for getting around interfering body contours. Pin in butt end of handle is used to unlock weather strip.

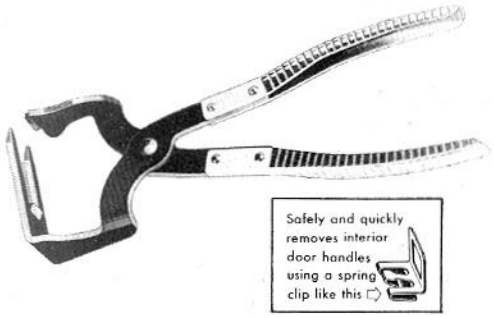


DOOR AND WINDOW HANDLE LOCK PIN REMOVER

C-533 For all Plymouth, Dodge, DeSoto and Chrysler cars, up to and including 1954 models.

Tool is Double Ended—Services Handles With Centered And Offset Pins.

You don't have to waste time hunting for the proper size punch when you have this inexpensive tool available. Tapered jaws of tool press the flange away from door panel and hardened pin drives handle lock pin out of handle shaft.

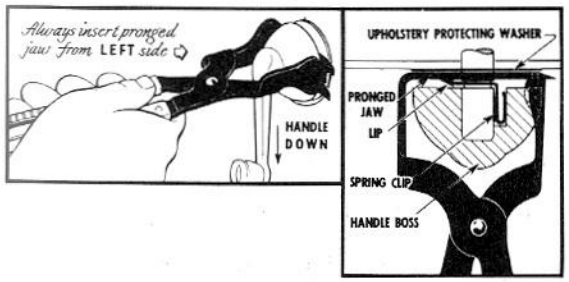


DOOR AND WINDOW HANDLE REMOVER

C-3448 For all 1955 and 1956 Plymouth, Dodge, DeSoto, Chrysler and Imperial cars.

Easy-To-Use Pliers Release Spring Clip From Groove In Shaft—Protect Upholstery.

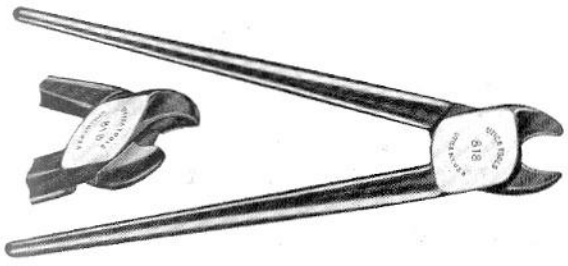
A simple squeeze on these special pliers and the new handles come off just as easily as those used on older models. Without these time-saving pliers, a pair of bent screw drivers must be juggled with the danger of damaging the upholstery. Tool is also used for quickly removing door trim panels where pronged jaw prevents clips from pulling through trim panel. Every body trim repair man needs these special pliers.

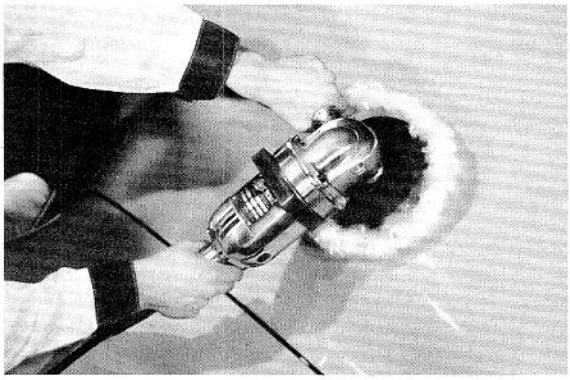


BODY TRIMMERS' HOG RING PLIERS

C-3036 For small hog rings.

Installation of seat covers and replacement seat trim can be greatly speeded up through the use of these special pliers. Closes right prong over left prong.





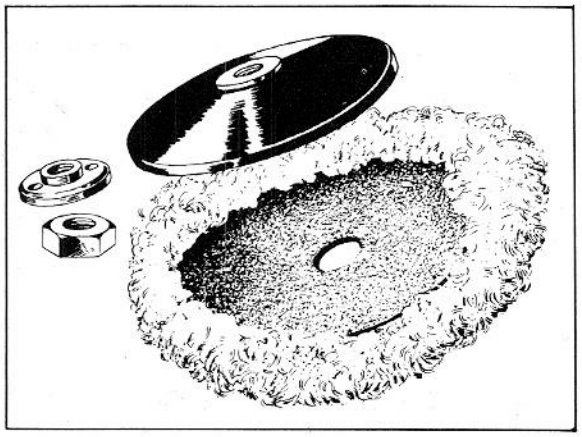
This Polisher Has Proper Speed—Power And Design For Obtaining Best Results From World Famous LUSTUR-SEAL.

HEAVY DUTY POLISHER AND BUFFER

MT-270 Supplied complete with special rubber back-up pad and sheepskin buffer pad. Powered with 110 Volt, 0 to 60 Cycle, 1250 R.P.M., 5 Amp. universal motor.

Used By Factory Representatives of LUSTUR-SEAL.

Proper and satisfactory results from some of the better car polishes requires the use of a heavy-duty power polisher like this to burnish the polish to a hard long-lasting finish. The special flexible type back-up pad and sheepskin buffer pad were developed especially for this polisher to burnish the polish in accordance with the polish manufacturer's recommendations. Special non-marring rubber rest block allows buffer to be rested on polished surface without danger of scratching or marring car finish. Removable guide handle may be changed from one side to other making buffer adaptable to both left and right hand operators.



Proper Back-Up Plates And Lambswool Buffing Pads Are Essential To Get Best Results From LUSTUR-SEAL.

BACK-UP PLATES AND BUFFING PADS AVAILABLE FOR POPULAR MAKES OF POLISHERS

MT-270-2 Lambswool Buffer Pad.

MT-270-3 Back-Up Plate—For THOR and other buffers with 5/8" shafts.

MT-270-4 Back-Up Plate—For BLACK & DECKER, also 1952 and later MILWAUKEE buffers.

MT-270-5 Back-Up Plate—For ACME and PORCELAINIZE buffers with 3/8" shaft with bevel.

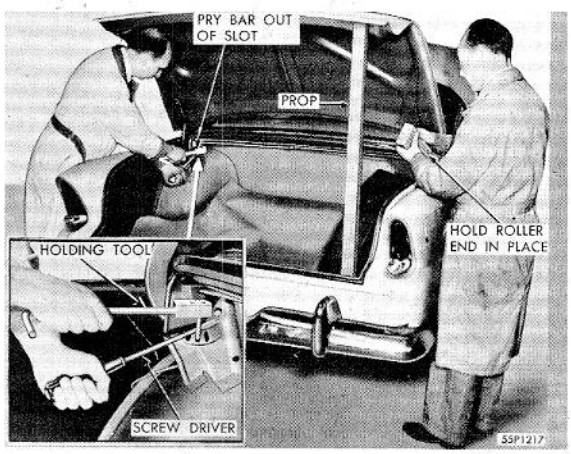
MT-270-6 Back-Up Plate—For SIOUX buffers with 3/8" shaft.

MT-270-7 Back-Up Plate—For MILWAUKEE buffers up to 1952 with 1/2" shaft.

All plates supplied with attaching nut.

These Are Same As Recommended By LUSTUR-SEAL Factory.

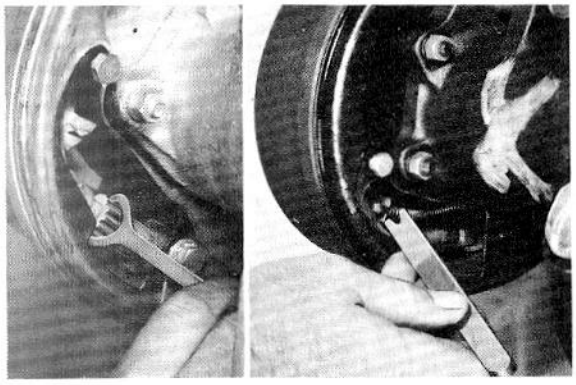
The proper shape and flexible qualities of these hard rubber, back-up plates have been especially designed for obtaining the best results from LUSTUR-SEAL.



TRUNK LID TORSION BAR REMOVER AND INSTALLER

C-3449 For All 1955 Models.

The trunk lid torsion bars can be safely adjusted with this special tool to provide the proper lifting force to counterbalance the trunk lid. Special care should be exercised when removing these torsion bars as they will unwind when taken from position. This tool provides a safe, convenient means of removing, installing or shifting the bars to the required position without letting them unwind and lose their tension.



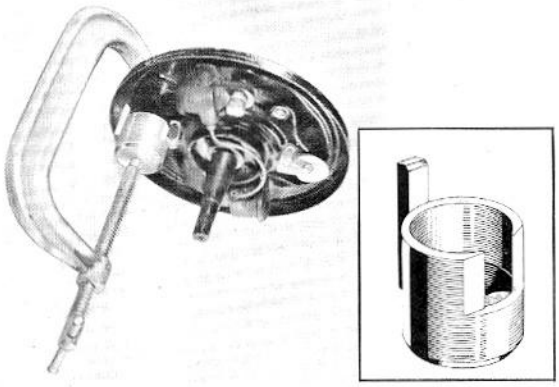
C-3014 C-3015

HAND BRAKE ADJUSTING NUT SPANNER AND CABLE INSTALLING TOOL

C-3014 Spanner. **C-3015** Cable Tool.

For 1950 through 1956 Plymouth, Dodge, DeSoto and Chrysler cars equipped with Easilock parking brakes.

The long, slim handle of the spanner avoids interference with close by controls. It tightens or loosens the barrel type adjusting nut without removing the spanner from the limited access opening. Without the simple cable installing tool it is very difficult to insert the control cable in the slot of the adjusting lever. Order as a pair.

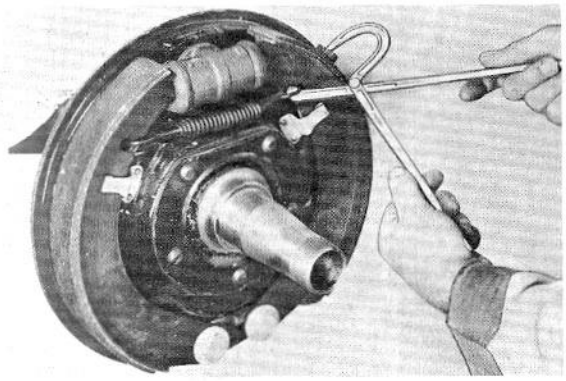


BRAKE SHOE CAM PIN POSITIONING TOOL

C-3248 For all Plymouth, Dodge, DeSoto and Chrysler brakes.

Used With "C" Clamp To Lift Backing Plate To Support Brake Shoe.

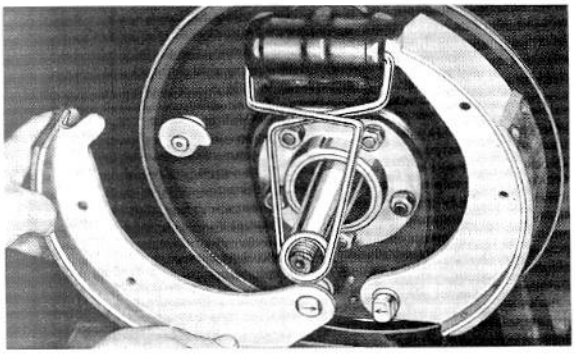
Correct brake shoe alignment can be accurately checked with the Miller TRU-BRAKE Gauge. If the cam pin is too high or too low it may be the cause of noisy erratic brake action or a soft, spongy brake pedal. A cam pin that is too high can be easily and quickly filed to the correct height. To raise a cam pin that is too low requires the use of this special tool. Used with a standard C-clamp it will safely raise the cam pin to provide the required brake shoe alignment without distorting the brake shoe support plate.



BRAKE SHOE RETURN SPRING REMOVING AND INSTALLING PLIERS

C-312 For all models up to 1955. See page 42 for Tool C-3462 to service 1956 cars.

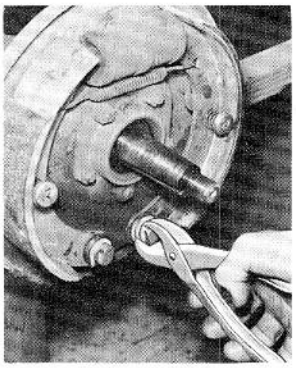
The use of a small piece of discarded brake lining to protect the surface of a bonded shoe makes this plier-type spring remover and installer the most versatile tool for this service. The long handles provide ample leverage for the stronger springs while notches in the handles adapt them to those cars where the springs must be piloted in and out of position by sliding them along the handles.

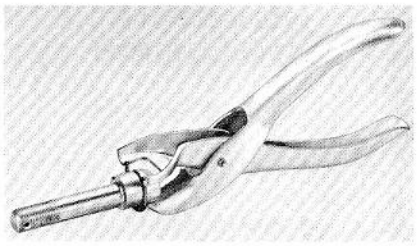


BRAKE CYLINDER PISTON CLAMPS

C-416 Set of 4 Clamps for Most All Cars.

Your brake Service Department can use several sets of these handy spring steel clamps that fit all sizes of brake cylinders. They are instantly appreciated by all brake mechanics for holding brake pistons in cylinders when the brake drum is removed. Saves brake fluid — extra bleeding of lines and loss of time. Brake drum cannot be installed without removing clamp. One clamp fits all sizes of cylinders — four clamps required to a car. Four clamps to a set.

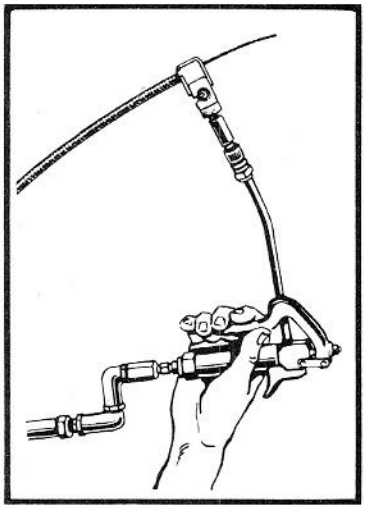


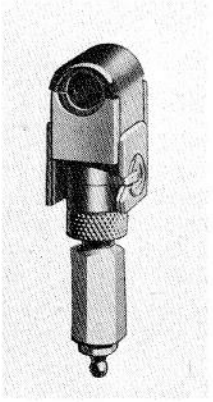


BRAKE ANCHOR BOLT WASHER PLIERS

C-826 For all Plymouth, Dodge, DeSoto and Chrysler cars.

Brake service involving the removal of brake shoes can now be speeded up considerably through use of these rugged case hardened pressed steel pliers for safely removing the brake anchor bolt washer. They are easy to use and require no adjustment but provide a positive grip that will remove the tightest washer.





BRAKE CABLE LUBRICATOR FOR DODGE TRUCKS

C-3219 For ½, ¾, and 1 Ton Dodge Trucks.

The hand brake cable can be lubricated very effectively with a minimum of effort through the use of this special lubricator attached to the upper end of the cable housing. A rubber bushing fits the ⅛" cable while the ½" brake cable housing is securely clamped in the lubricator. Lubricant can be forced the entire length of the cable with ordinary lubrication equipment.

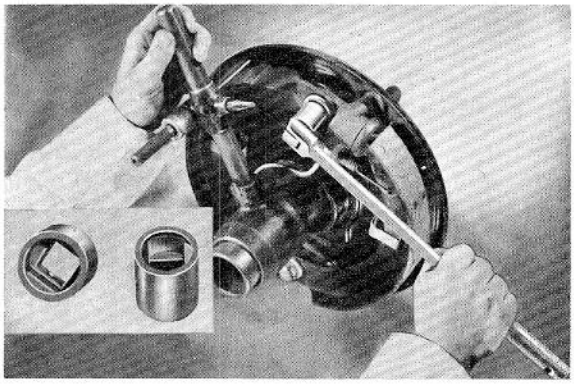
BRAKE ANCHOR ADJUSTING SOCKETS

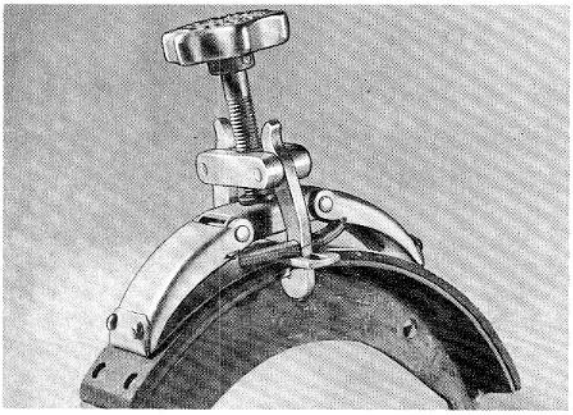
C-898 For anchor bolts with ½" flat.

C-899 For anchor bolts with 9/16" flat.

Speed Up Brake Adjustments By Supplying These Forged Sockets To Your Men.

Brake service men will turn out better brake jobs faster when equipped with these inexpensive, simple sockets. They fit ½" square drive wrench handles and are forged to size providing a safe firm grip on the anchor. Without these sockets, anchors are often not adjusted because no other standard wrench will fit. Eliminates use of adjustable wrenches that slip and cause skinned knuckles.





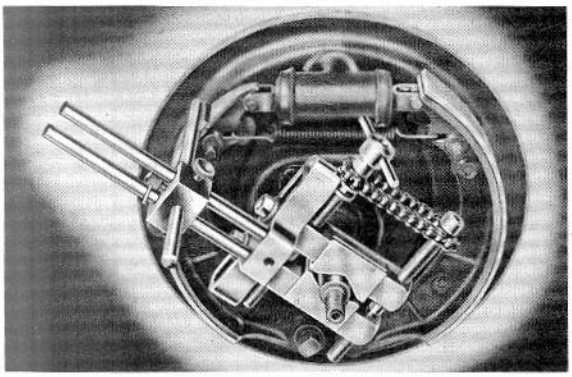
BRAKE LINING CLAMPS

C-557 For all linings up to 3" wide.

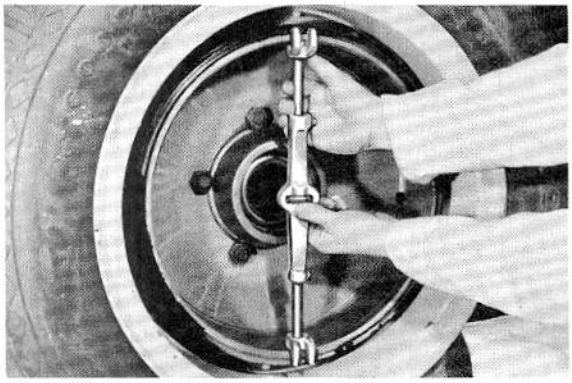
C-558 For all linings from 3" to 6½" wide.

Keeps Lining Tight Against Shoe While Riveting.

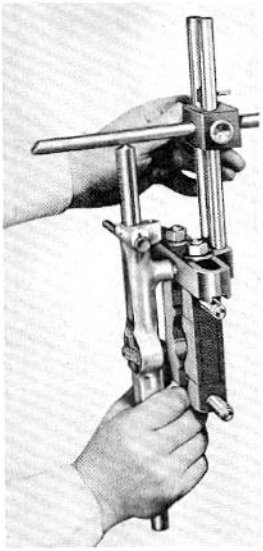
Avoid looseness between the brake shoe and brake lining, when new lining is riveted in place, by using one of these clamps. Clamp snaps over edge of shoe and positive screw pressure holds lining tight. Clamp can be worked along lining to allow fast progressive riveting.



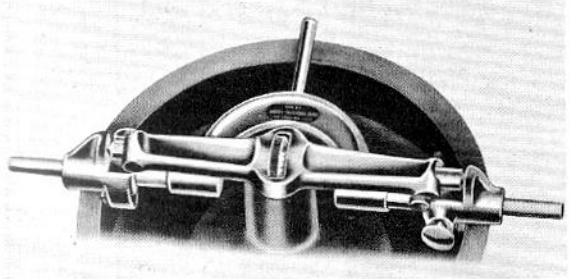
Brake gauge mounts and locks directly on spindle, axle shaft or axle tube—no adapters necessary.



Drum micrometer mounts in hook type fingers or straight pins, makes accurate drum measuring easy and fast.



Micrometer mounts in brake shoe gauge with hardened dowel pin—transfers exact drum size easily.



BRAKE ADJUSTING GAUGES FOR PASSENGER CARS AND TRUCKS

Passenger Car And Medium Truck Gauge

DD-1168 For all passenger cars and trucks up to 2½ ton capacity.

Fits all spindles and axles from ¾" to 3" diameter. Accommodates full range of brakes from 9" to 16½" diameter. Special adapters included for Ford, Mercury and Lincoln axles. Supplied complete with Drum Micrometer. DD-1168-A is gauge less Drum Micrometer for owners of Pedestal Type Brake Shoe and Lining Grinders as shown on Page 41.

Combination Car And H.D. Truck Gauge

DD-1167 For all passenger cars and trucks up to 4 ton capacity.

Fits all spindles and axles from ⅝" to 4⅝" diameter. Accommodates all brakes from 9" to 16½" diameter. Adapter available to increase range to 21½" diameter brakes. Supplied complete with Drum Micrometer. Truck brake mechanics will turn out better brake jobs faster with this simple gauge. Eliminates need of demounting tire and wheel assemblies to expose peep hole in drum.

"V" Type Jaws Eliminate Loose Adapters

The hardened and ground "V" jaws are chain locked together to provide a fast, positive and accurate fit to spindle or axle. No loose adapters or bushings are required. DD-1167 is equipped with reversible "V" blocks which accommodate maximum range of axle sizes.

Drum Mike Checks Drum Diameter Also Sets Brake Shoe Adjusting Gauge

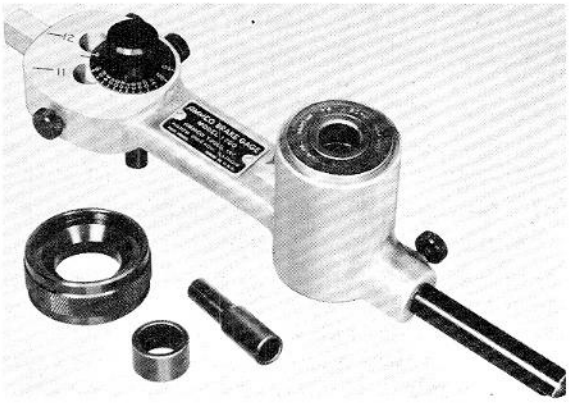
Drum Micrometer will check drum size accurately to thousandth part of an inch. Order Micro-Check to adapt Drum Mike to Dodge Truck drums where hub projects past outer edge of drum. Drum Mike mounts on brake shoe gauge for setting it automatically to proper drum size. No special skill is required. Use of this gauge helps assure maximum brake efficiency — especially essential for adjusting brakes equipped with new tapered linings. Also checks cam post height.

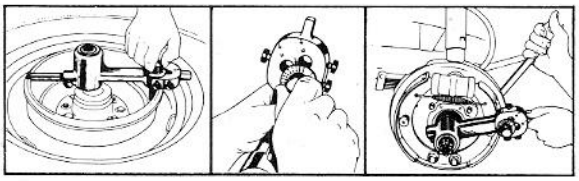
BRAKE DRUM MICRO-CHECK

DD-1169 For all drums from 9" to 19" diameter.

Offset Jig Needed To Adapt Drum Mike To Some Truck Drums

Most all wheel hubs on current model trucks extend through the brake drum making it impossible to mike the drum with a straight-across type of micrometer. This special offset jig, however, will adapt the standard drum micrometers supplied with the Pedestal Type Brake Shoe Grinders and the above brake gauges, to this popular type of truck drum design. Be sure to order this Micro-Check with your Dodge truck brake shoe gauge.

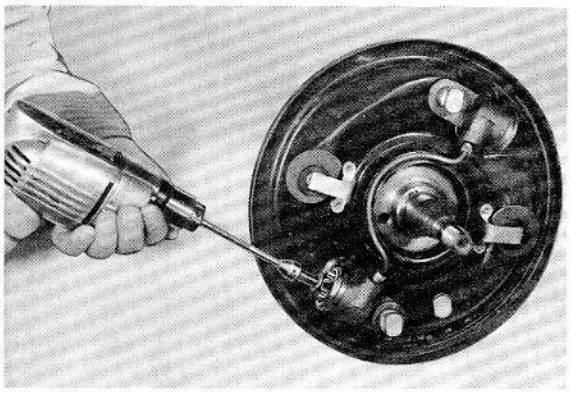


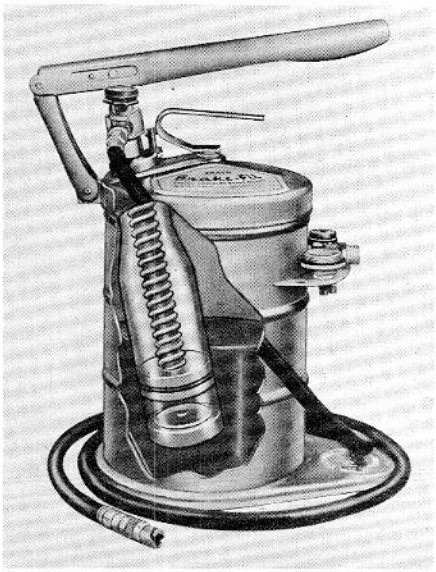


Checking Brake Drum For Size and Concentricity.

Dial Adjustable For Undersize and Oversize Drums.

Gauge Sets Shoes To Accurate Heel and Toe Clearance.





COMBINATION BRAKE ADJUSTING GAUGE AND BRAKE DRUM MICROMETER

C-3492 For 10", 11" and 12" brake drums on Plymouth, Dodge, DeSoto and Chrysler cars.

Provides Fast, Accurate Method Of Setting Heel And Toe Clearance With Drum.

The extension arm at the base of the gauge is graduated for each size of drum. A calibrated eccentric dial on the opposite end allows both undersize and oversize drums to be accurately measured, as shown in sketches at left. Gauge eliminates need for dummy drums and provides a fast, dependable method of adjusting eccentric brake shoes to exact heel and toe clearances with its own particular drum. Provides firm, full-pedal brakes with minimum effort and skill.

Lightweight Housing And Built-In Adapters Make Gauge Easy To Use.

Unique design eliminates need for several different sizes of adapters to fit various spindles and axles. Because it is so easy to use — mechanics use it on every major brake adjusting job.

BRAKE CYLINDER SURFACING HONE

C-3080 Capacity ¾" dia. to 1½" dia.

Safely Polishes Away Rust And Corrosion Without Honing Cylinder Oversize.

Surface corrosion can be easily and quickly removed with this hone from master and wheel cylinders that might otherwise have to be discarded. Restores cylinder bore to bright, "like new" finish. Cylinder bores should not be honed more than .002" oversize.

BRAKE SYSTEM BLEEDER

C-837-B 2½ gallon tank complete with hose and fittings. (Includes C-3494-A Special Adapter to fit master cylinders of all late Chrysler made vehicles.)

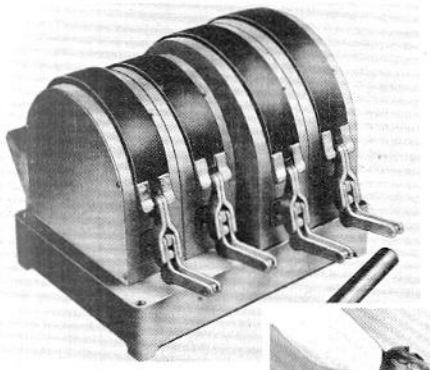
Spring Powered Piston Eliminates Annoyance Of Air Mixing With Fluid.

Pull up on the lever and the spring actuated piston is "cocked" and ready to deliver air-free brake fluid under ample pressure to insure positive bleeding of a hydraulic brake system. Gauge shows actual pressure developed. Provides ideal unit for road service or fleet maintenance use.

Special Adapter For 1955 and 1956 Master Cylinders Available Separately

C-3494-A For all late Plymouth, Dodge, DeSoto and Chrysler models. See page 42.

Owners of brake bleeder tanks will need this special adapter for servicing these cars. Adapter has ⅛" opening and is supplied complete with hold-down screw. (C-3494-A equipped with hex. head hold-down screw and right angle elbow fitting.)



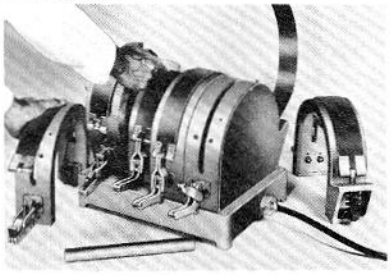
— FAST —
BONDS
30 To 40 Shoes PER HOUR

Separate Thermostat controls EACH ANVIL to desired 400° to 500° F. Temperature.

Anvils Can Be Interchanged Quickly

9"—10"—11" & 12" Dia. Anvils Available

See Nos. KB-9009 to KB-9012.



Follow-up Pressure Springs Provide 75-100 lbs. Per Square Inch.

ELECTRIC 4-IN-1 BRAKE SHOE LINING BONDER

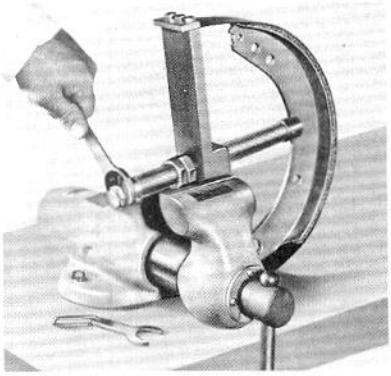
KB-9000 Base and four anvils complete with separate timer and 6' lead wire. (Specify size of anvils desired.) Operates on 220 volt power for as little as 6c per hour.

Ideal For Both Parts Departments And Brake Service Shops

Here's a high production — yet low-cost — bonder that will fit into the needs of small, medium and large brake bonding shops. It can be equipped with anvils of four different sizes or all one size — either way it will produce as many as fifty shoes an hour. Extremely simple and foolproof construction — can be operated by unskilled help after only five minutes' instruction.

Extra Anvils Available Separately — Can Be Ordered As Desired

Extra anvils merely "plug" in so you can buy your bonder with four different size anvils with extra anvils for peak bonding periods. Tempilstiks available in various temperature ratings to check thermostats — see KB-6004 to KB-6007 in index for sizes.



Available in 2 Sizes To Service Cars And Trucks.

MILLER BRAKE SHOE AND LINING CLAMPING JIGS FOR USE WITH BONDING OVENS

C-846 Single Bow Type Clamp for 10", 11", 12" Dia. Shoes.

C-3550 Band only — 2½" wide — for use with C-846 Bonding Clamp — to service center plane brake shoes.

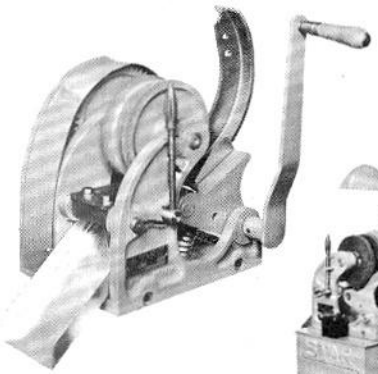
C-856 Set of 8 C-846 Clamps, one C-855 Deflection Gauge and a C-894 8-Clamp holder rack.

DD-1146 Single 14" Dia. Bow Type Clamp complete with one each 1¾" and 2" wide bands.

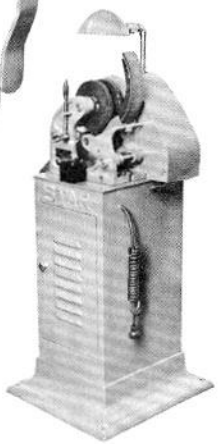
DD-1159 Set of 2 Deflection Gauges for DD-1146 Clamp.

Miller Bow Type Clamps Develop 2,000 Lb. Pressure.

The bow type Miller Clamps were developed to make the servicing of Cyclebond linings easier and completely dependable. Their design accommodates most all the various designs of 10", 11", 12" and 14" diameter brake shoes used by all popular current models of cars and trucks. Controlled lining to shoe pressure is assured by using a spacer gauge to measure the deflection of the cross bow. Sixteen of the C-846 loaded clamps can be accommodated at one time in the Miller Oven. Ovens available on special order.



C-3222



These Are Latest Model "STAR" Machines Equipped With Solid Steel Gears And Lubricated Bearings.

C-3299

BRAKE SHOE LINING STRIPPERS BLADE-TYPE, POWER OR HAND OPERATED

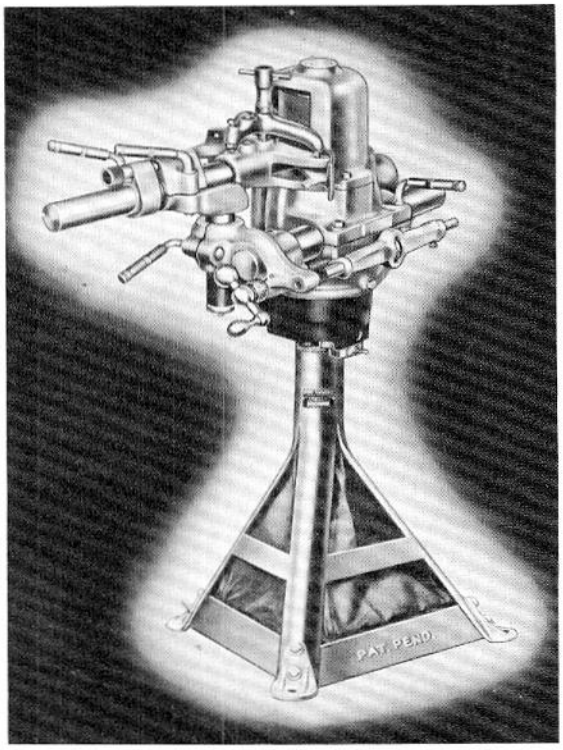
C-3222 Hand operated, for all shoes up to 16" dia. x 3" wide.

C-3299 Same capacity motorized model.

C-3300 Motorized model, less motor and switch.

Peels Off Old Brake Lining Fast And Clean "Just Like Peeling A Banana!"

Geared rollers feed the brake shoe against a sharp, rugged, knife blade to cleanly strip off old lining without gouging into the metal face of the shoe. A pressure cam, operated with the left hand, keeps the blade snug against the face of the brake shoe. Replacement blades available separately.



BRAKE SHOE LINING GRINDERS

MT-293 Model 35-Jr. Pedestal Type Brake Shoe Grinder Equipped with 1/3 H.P. 1750 R.P.M. Motor. For all Passenger Car Brake Shoes from 9" to 18" Diameter and Up to 4" Wide.

MT-294 Model 35-D Pedestal Type Brake Shoe Grinder. Equipped with High-Speed, Heavy-Duty ½ H.P. 3450 R.P.M. Motor for All Passenger Cars and Light Trucks. Grinds Brake Shoes Up to 18" Diameter and 4" Wide.

MT-290 Model 35 Pedestal Type Brake Shoe Grinder. Equipped with ½ H.P. Motor and 6" Wide Grinding Sleeve, Also clamping Fixtures for All Passenger Car Shoes and Formed Type Truck Brake Shoes. Grinds Brake Shoes from 9" to 19" Diameter x 6" Wide.

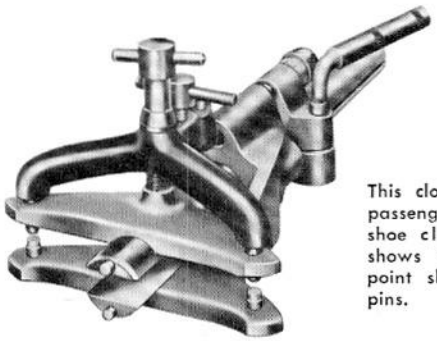
(Underlined portion indicates principal differences between models.)

Accurate—Rugged Design Plus Wide Range of Capacity Makes These Grinders Favorites With Brake Service Engineers

These grinders meet the requirement of every shop as they permit even semi-skilled operators to production grind a wide range of brake shoes to rigid specifications necessary for quick yet quiet stops. These machines are preferred by meticulous brake engineers who demand the ultimate in design and accuracy.

Taper Grinds Brake Linings To Produce Maximum Brake Efficiency

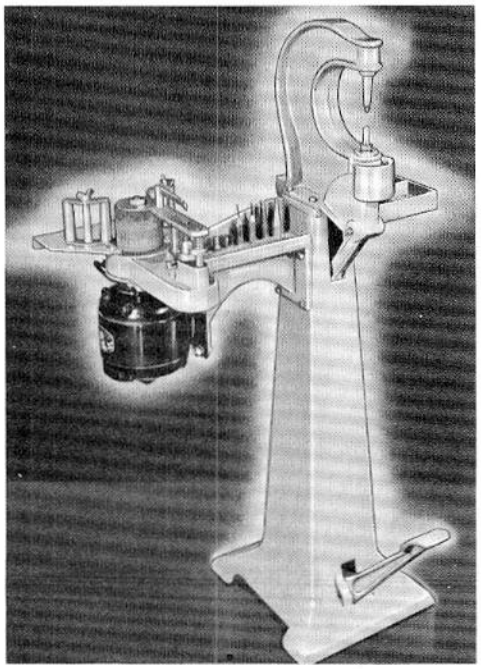
The patented method of interlocking the micrometer with the grinder after measuring the brake drum permits grinding linings to predetermined undersizes or to exact brake drum diameter within 1/1000 inch. Many brake complaints (squeak, dive, fade, etc.) can be quickly and permanently eliminated through the use of these machines.



This close-up of the passenger car brake shoe clamping jig shows the vital 6 point shoe contact pins.

Fast Operating—Accurate Clamping Jig, Vacuum Attachment and Drum Micrometer INCLUDED With Each Grinder

The fast clamping brake shoe jig has six contact points that accurately centralize all sizes of shoes. A high speed ball-bearing motor with self contained supercharger type suction fan collects all the lining dust and keeps the operator clean and comfortable.



BRAKE RELINING MACHINE

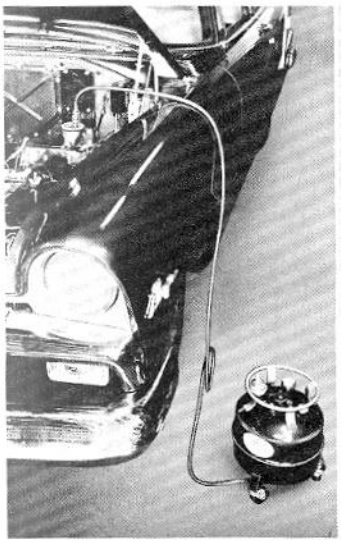
C-562 Complete with standard set of punches and drills with carboloy tipped countersinks. Powered with 60 cycle A.C. motor.

This Single Machine Derivets Old Linings, Drills and Countersinks New Linings and Grinds Surface of New Bands or Linings

This machine is particularly adaptable to the requirements of car dealers, fleet owners or brake service shops. Carboloy tipped countersinks provide long efficient service. Pedal adjustable for light or heavy work. Equipped with ten compartment rivet tray, tool holder and high speed grinder.

Clutch and Parking Brake Facings May Also Be Riveted With This Machine

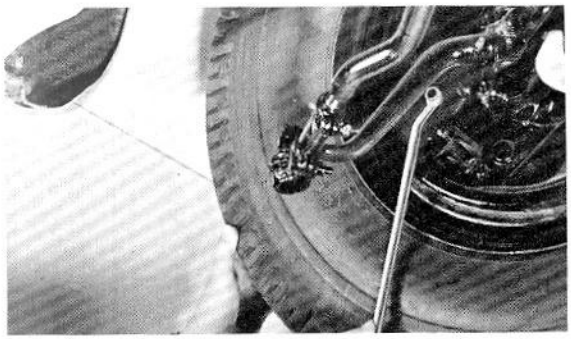
In addition to riveting all types of wheel brake linings it will also rivet clutch and parking brake facings. The tools are reversible which permits riveting the smallest circle drive shaft band.

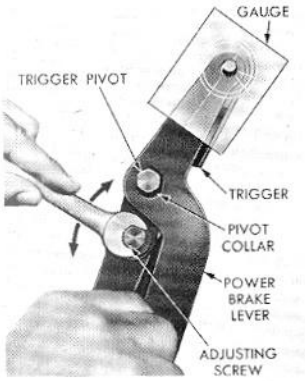


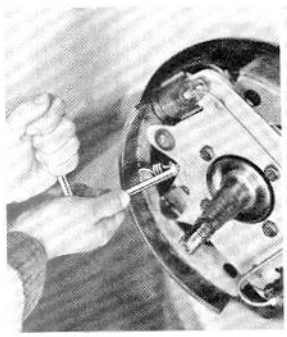
C-3494-A ADAPTER now has hex. head screw and 90° elbow.

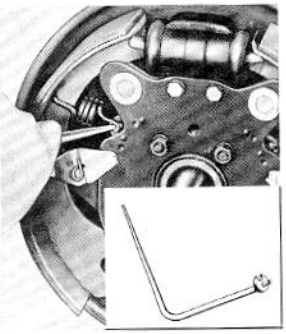
C-3494-A MASTER CYLINDER ADAPTER

For 1955 and 1956 Plymouth, Dodge, DeSoto and Chrysler cars. Included with C-3496 Bleeders, also available separately.









ONE-MAN BLEEDER FOR HYDRAULIC BRAKE SYSTEMS

C-3496 Complete with hose and fittings for all models.

2½ Gallon Capacity—Includes Adapters For All Current Model Cars.

A special float control valve located in the bottom of this tank automatically closes when fluid drops to the level of outlet. This prevents air being accidentally injected directly into the brake system when brake fluid supply is exhausted. Twenty-five pounds is normal air pressure used. Tank is equipped with air pressure gauge, automatic release safety valve, rubber tired casters, and instrument guard ring which also acts as convenient hose reel. Diameter 10" x 14" high.

BRAKE BLEEDER HOSE

C-650 For All Models.

This hose is fitted with two different sizes of threaded adapters to fit various sizes of bleeder screw openings. Used with any standard glass jar as recommended in factory service manual.

BRAKE ADJUSTING WRENCH

C-3512 For 1956 Chrysler and DeSoto cars.

Standard Wrenches Are Too Short To Clear Support Arms On 1956 Cars.

Every brake shop and mechanic will find this special single hex. broached wrench a time saver when adjusting the new "Center Plane" brakes. Offset is just right to fit recessed brake cam, and long handle reaches past steering arms and rear springs. Short or open end wrenches may damage adjusting cam.

POWER BRAKE TRIGGER FINGER ADJUSTING GAUGE

C-3508 For 1956 Plymouth, Dodge, DeSoto and Chrysler cars equipped with power brakes.

Clear Plastic Gauge Is Essential For Accurate Adjustment On 1956 Cars.

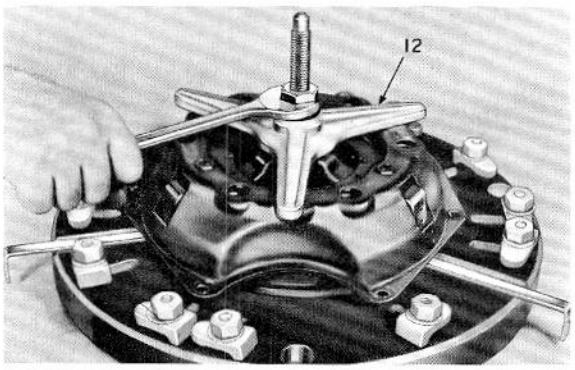
The illustration shows how this simple "see-thru" gauge indicates alignment of the trigger. Follow adjustment instructions given in factory service manual. Only one bolt need be removed to release complete brake pedal assembly and check trigger adjustment.

BRAKE SHOE RETURN SPRING REMOVER AND INSTALLER

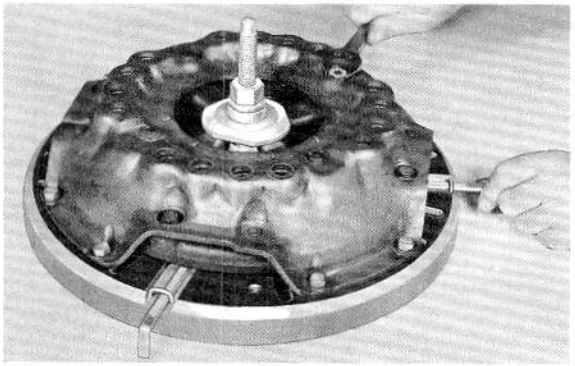
C-3462 For 1956 Chrysler and DeSoto cars.

New Type Tool Needed For 1956 Cars.

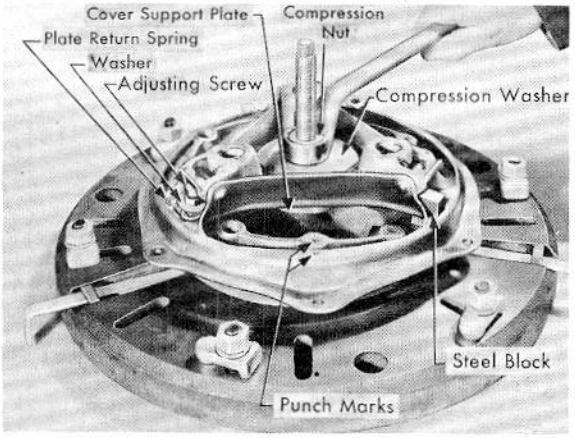
You can see at a glance why ordinary brake spring tools will not work on this brake. The cam end of the tool safely removes this spring while the tapered end quickly installs it. Insert shows tool only.



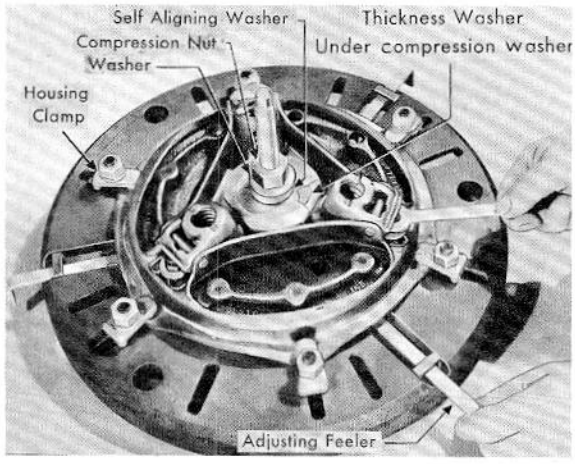
COMPRESSING PASS. CAR TYPE BORG AND BECK CLUTCH



ADJUSTING TRUCK TYPE BORG AND BECK CLUTCH



COMPRESSING AUBURN CLUTCH



ADJUSTING AUBURN CLUTCH

CLUTCH REBUILDING AND ADJUSTING FIXTURES

C-585-A For servicing all Plymouth, Dodge, DeSoto and Chrysler passenger cars, including Auburn clutches as used on some Plymouths.

C-585-B For all Plymouth, Dodge, DeSoto and Chrysler models, including those equipped with Auburn clutches, also Dodge Trucks equipped with 12" and 13" Borg & Beck Clutches. This model fixture should be ordered by all Dodge dealers.

CLUTCH ADJUSTING THICKNESS SPACERS AVAILABLE TO OWNERS OF C-585 FIXTURES

If you need replacements for lost spacers or newly released sizes, they are available individually or in sets. See your Factory Service Manual for proper thickness spacer needed or write for C-585 Spacer Chart.

Clutch rebuilding and adjusting service can be an important part of every dealer's service operation. Such a department requires a minimum of special equipment but can contribute generously in parts and labor sales that would otherwise be spent with a competitive shop. Such a department also is invaluable in preventing customer dissatisfaction by controlling quality of clutch rebuilding and adjustments, that is not possible where this service is "farmed" out to disinterested independent shops not equipped with the latest car factory instructions and specific service information.

The top illustration shows how simple it is to safely compress a clutch, preliminary to removing the springs and other parts for checking and possible replacement.

The second illustration shows how the levers are adjusted to "hair-line" accuracy by using the accurately ground feelers of the fixture against the clutch pressure plate, while the levers and springs are under actual working tension. This method automatically allows for strain and consequent distortion in the clutch housing. Operating instructions supplied with each fixture.

CLUTCH ADJUSTING FIXTURE SERVICE PACKAGES

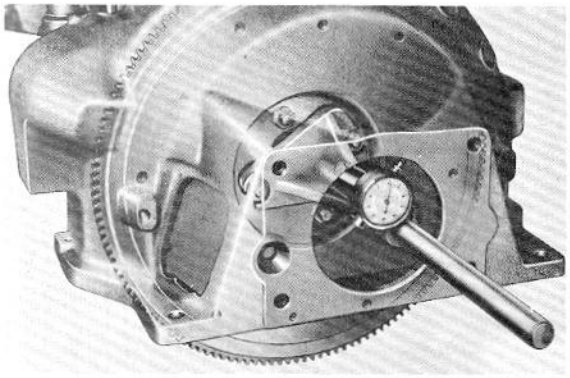
C-827 For Modernizing early model C-585 Fixtures with Latest Type Feelers.

Package includes a set of 3 new improved type feeler gauges, with hardened and ground gauge surfaces together with 3 lock staples. Installation instructions are packed with each kit. Illustration at left shows Auburn clutch being properly adjusted on C-585 fixture, using spacer No. C-585-20 and parts contained in C-824 package.

See Plymouth Service Bulletin No. 134 for service details.

C-824 For Adapting early model C-585 Fixtures For Servicing Auburn Clutches.

Owners of original C-585 Fixtures can add this inexpensive kit of parts to their fixtures and adapt it to service Auburn Clutches. Package includes 3 steel blocks, cover support plate and a new type compressor washer. These parts are all shown in use in illustration of fixture compressing Auburn Clutch.

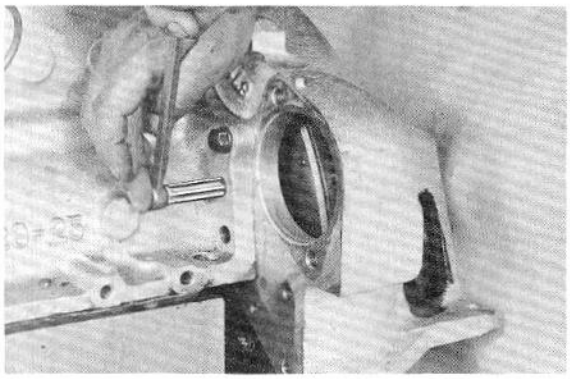


CLUTCH HOUSING ALIGNMENT CHECKING BAR

C-869 For All Plymouth, Dodge, DeSoto and Chrysler Engines. (With .001" Calibrated Dial Indicator)

C-870 Bar Only Less Dial Indicator. (Use With C-435 or C-3339 Dial Indicator)

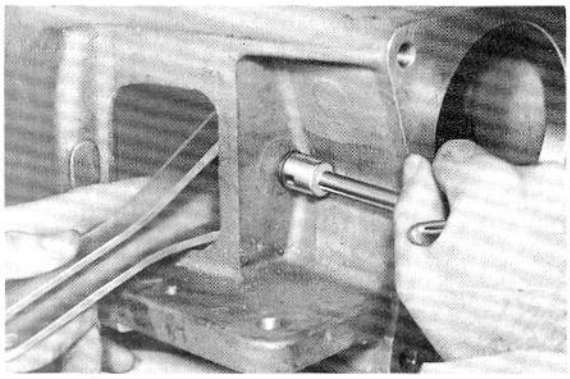
Ordinary dial indicator rods are not rigid enough to accurately indicate the bore and face of the clutch housing as shown. Such misalignment usually occurs when a new cylinder block is used with an old housing or a new housing with a used cylinder block. This bar can save your shop hours of time in checking and correcting such misalignment conditions which will usually make a transmission sound noisy or jump out of gear. Order with or without dial indicator.



CLUTCH HOUSING OVERSIZE DOWEL REAMER

C-860 For All Plymouth, Dodge, DeSoto and Chrysler Engines.

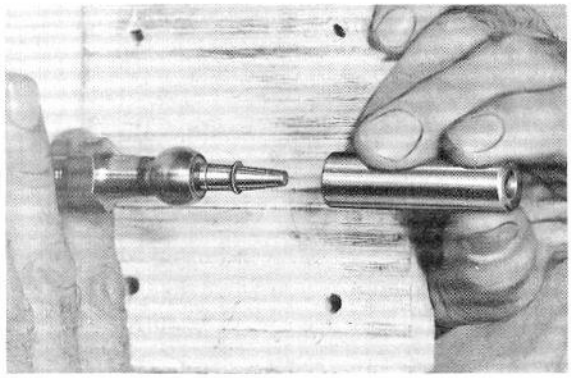
Dependable correction of misalignment between the clutch housing and the cylinder block can only be effected by aligning these two units and then line reaming the dowel holes in the clutch housing and cylinder block as a unit, with this special oversize dowel reamer. Oversize dowels will then hold the housing in place and maintain alignment. Oversize dowels available as standard MoPar service parts.



CLUTCH FORK PIVOT LOCK INSTALLING WRENCH *(Magnetized)*

C-3044 For all Plymouth cars equipped with Hi-Drive, 1953 and 1954 Dodge, 1952 through 1954 DeSoto, and 1951 thru 1954 Chrysler cars equipped with Torque Converters.

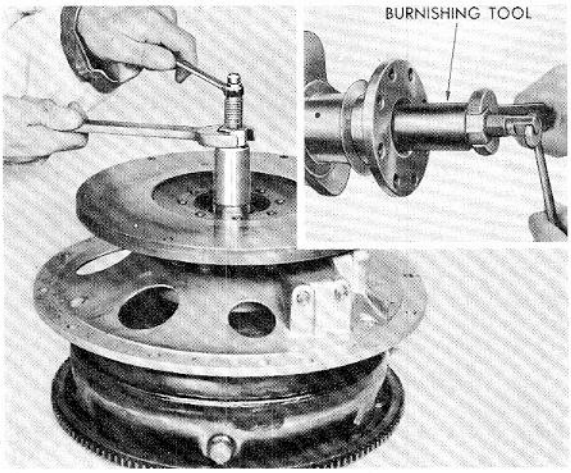
Removal and replacement of the small spring loaded lock washer on the clutch pivot shaft is practically impossible without the use of this simple tool. The socket is magnetized to safely hold the washer as it is turned 90° to unlock it from the shaft. This operation must be performed inside the clutch housing through a special opening as illustrated.



CLUTCH PIVOT SHAFT LOCK RING INSTALLING THIMBLE AND DRIVER

C-3055 For 1953 Dodge, 1952 thru 1954 DeSoto, and 1951 thru 1954 Chrysler cars equipped with Torque Converters.

Replacement of this special bearing and the small needle bearings on which it is mounted, requires the use of this small thimble and driver. The thimble slips over the end of the pivot shaft. The driver pushes the new spring steel snap ring over the thimble automatically expanding it just enough to allow it to slip in the groove of pivot shaft.

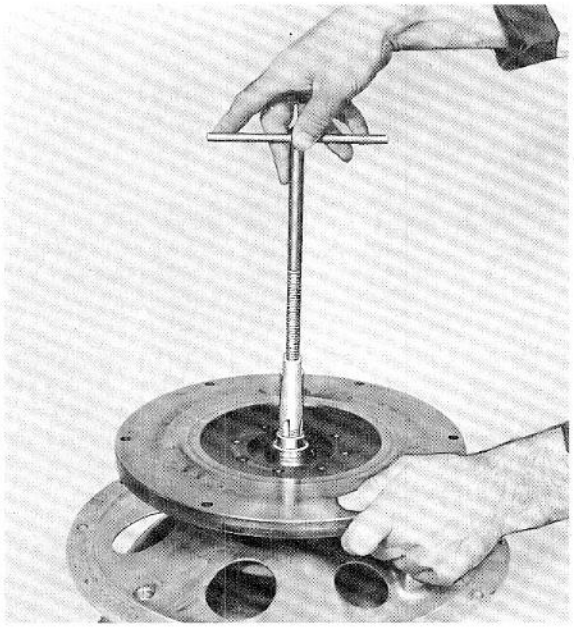


CLUTCH SHAFT PILOT BUSHING INSTALLING AND BURNISHING TOOL

C-3181 For all Plymouth, Dodge, DeSoto and Chrysler cars not equipped with Fluid Drive.

These are two purpose tools copied from the machine that originally installs these bushings at the car factory. By slipping a new bushing over the ground end of the tool, it is used as a driver to correctly install a new oilite bushing in the end of the crankshaft or torque converter. It is best to use a soft hammer with this tool. The cup is then installed and the tool pulled out of the bushing which automatically burnishes the inside diameter of the bushing to the correct size and to a smooth long-lasting finish.

These oilite bushings should not be reamed. Installing them with one of these special tools also assures a tight bushing, for the burnisher swedges the bushing tight in the crankshaft as it finishes the bushing, while being pulled out with the cup and pressure nut.



CLUTCH SHAFT PILOT BUSHING REMOVER

C-3185 For all Plymouth, Dodge, DeSoto and Chrysler engines.

The hard, taper threaded adapter is first screwed into the soft bronze bushing so that it makes its own threads and gains a solid grip on the bushing. The puller screw is then turned into it and as it strikes the bottom of the hole in the crankshaft, the bushing is forced out of the crankshaft. Be sure and use tool C-3181 (illustrated above) for installing and correctly burnishing the new bushing to size.

CLUTCH AND VALVE SPRING TESTING FIXTURE

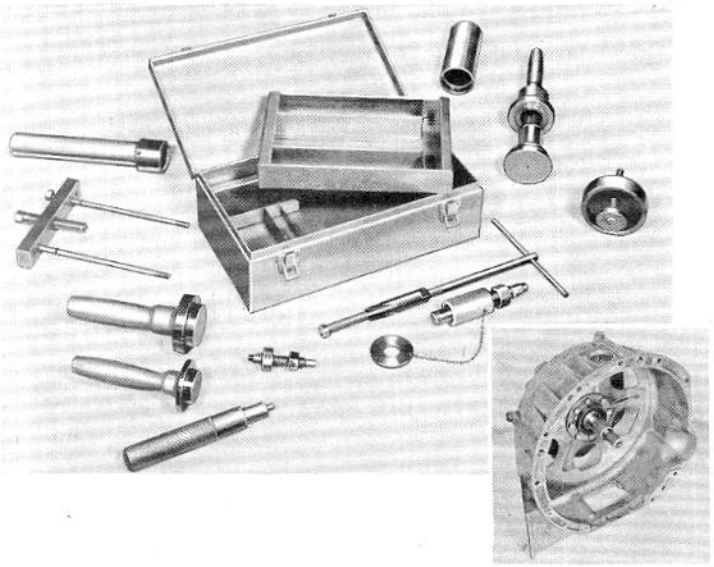
C-647 Use with 100 foot-pound torque indicating wrench.

This low-cost jig makes it possible to obtain extra service from your foot-pound torque wrench. By using it as a lever all types of clutch and valve springs can be accurately checked before reassembly.

Adjustable anvil plate is scribed for easy centering of spring and has its own scale for fast adjustment to proper height.

A special built-in sound device indicates instant that compression beam passes center. This allows operator to keep his eyes on torque wrench scale and obtain very accurate spring tension reading.

The compression lever is purposely held to 6" to make fixture compact. Foot-pound torque wrench readings should, therefore, be multiplied by two to obtain actual weight of spring tested.



Engine Oil Fed Type Converter.

ENGINE OIL FED TYPE TORQUE CONVERTER SERVICE TOOL SET

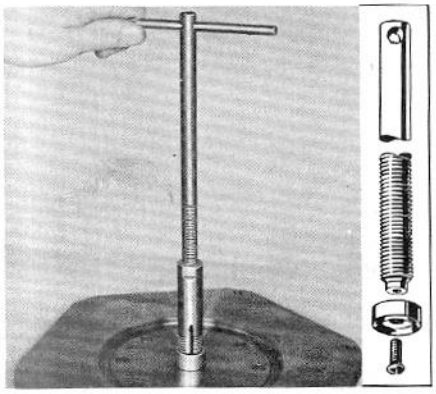
C-3206 Set of 11 Tools in #1230 Case

CONTAINS ONE EACH OF FOLLOWING TOOLS:

C-3178	DRIVER—Installing Oil Pressure Regulator Valve Spring Plug
C-3179	REMOVER—Oil Pressure Regulator Valve Spring Plug
C-3180	Driver—Installing Impeller Hub Seal in Retainer
†C-3181	INSTALLER & BURNISHER—Clutch Shaft Bushing in Turbine Shaft
†C-3182	PULLER—Turbine Shaft from Support Plate and Bearing Assembly
†C-3183	SLEEVE—Installing Turbine Shaft in Converter Support Plate and Bearing Assembly
C-3184	PULLER—Turbine Shaft Bearing from Support Plate
†C-3185	REMOVER—Clutch Shaft Bushing from Turbine Shaft
C-3186	DRIVER—Installing Turbine Shaft Bearing in Support Plate and Bearing Assembly
C-3187	DRIVER—Installing Turbine Shaft Oil Seal in Support Plate
C-3192	DRIVER—Installing Stator Plate in Support Plate

†***Services BOTH Integral Pump and Engine Oil Fed Types of Converters.***

SP Tool Parts Packages Convert Integral Pump Type Converter Tools To Service Both Types of Converters.

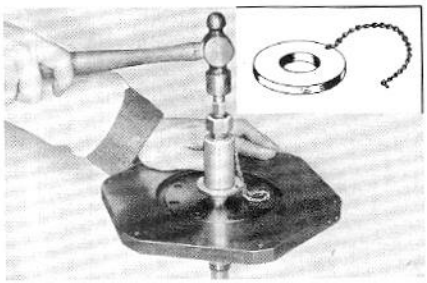


CLUTCH SHAFT PILOT BUSHING REMOVER

C-3185 For Plymouth, Dodge, DeSoto and Chrysler cars including those equipped with Converters. Does not service PowerFlite or Fluid Drive equipped cars. (Use C-625 for Fluid Drive equipped models.)

SP-1687 Parts Convert C-41 Tool To C-3185 Tool

Normal wear on the clutch shaft pilot bushing will require its replacement just as on cars not equipped with Torque Converters. The C-41 early type of tool for this service should not be used on cars with Engine Oil Fed Converters as the center screw will damage the oil pressure valve spring. The C-41 Tool can easily be converted to service all models with the SP-1687 Parts package.

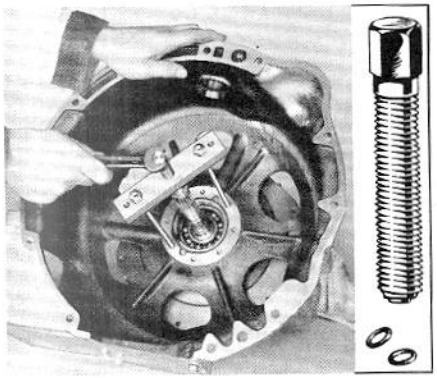


CLUTCH SHAFT PILOT BUSHING DRIVER AND BURNISHER

C-3181 For Plymouth, Dodge, DeSoto and Chrysler cars including those equipped with Converters. Does not service PowerFlite or Fluid Drive equipped cars. (Use C-708 for Fluid Drive equipped models.)

SP-1688 Parts Convert C-3077 Tool To C-3181 Tool.

At left, this tool is being used to install a new oilite bushing. Spacer automatically positions bushing to correct depth. As the bushing is driven in place it compresses tight on the combination pilot and burnisher portion of the tool. Pulling tool out of bushing burnishes the bushing to size and expands it tight in the turbine shaft. Bushing should not be reamed.



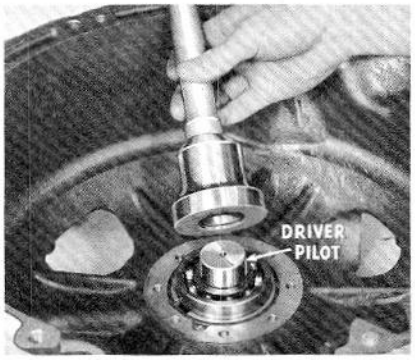
TURBINE SHAFT PULLER

C-3182 For all Plymouth, Dodge DeSoto and Chrysler Engine Oil Fed Converters.

SP-1689 Special Screw And Pair Of "0" Rings Convert C-3121 To C-3182.

Be sure to remove turbine shaft bearing inner snap ring before using this puller.

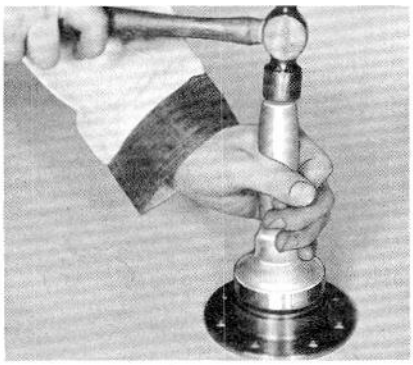
When you use this simple tool there is no need to worry about damaging the aluminum alloy converter support plate. The long puller screws and the rigid crosspiece provide a safe, dependable means of pressing the turbine shaft out of the support plate and bearing assembly.



TURBINE SHAFT BEARING DRIVER AND ALIGNING PILOT

C-3186 For all Plymouth, Dodge, DeSoto and Chrysler Engine Oil Fed Converters.

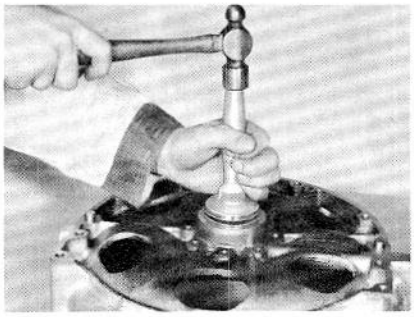
Here you see the special C-3186 Driver about to be installed on the aligning pilot part of this tool. The pilot, which has already been installed in the bearing, helps keep the heavy driver properly aligned to assure safe and correct installation of a replacement bearing in the aluminum support plate. Improper installation of this bearing can cause irreparable damage to the support plate.



IMPELLER HUB SEAL INSTALLING DRIVER

C-3180 For all Plymouth, Dodge, DeSoto and Chrysler Engine Oil Fed Converters.

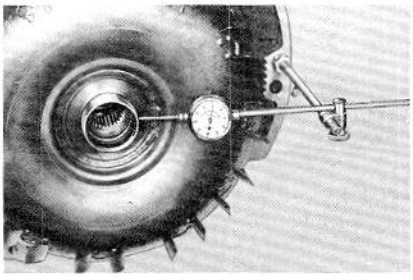
Considerable care should be taken when installing any new seal, especially this new type that seals on both its outside and inside diameter. A special driver such as this, has just the right size pilot and an accurately machined outside diameter. It not only protects the new seal, but saves the time usually lost looking for some substitute piece of pipe that at best, only provides a haphazard makeshift tool.



TURBINE SHAFT OIL SEAL DRIVER

C-3187 For all Plymouth, Dodge, DeSoto and Chrysler Engine Oil Fed Converters.

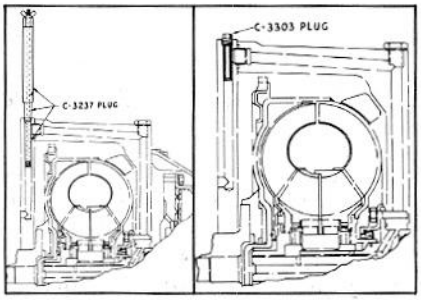
The seal being installed in the illustration at the left is of a new double-sealing type. It seals on the outside diameter as well as on its inside diameter that fits the turbine shaft.



TORQUE CONVERTER HUB ALIGNMENT CHECKING GAUGE

C-3339 For all Plymouth, Dodge, DeSoto and Chrysler models.

This is the same, dependable, dial indicator, support rods, clamp, and swivel set recommended for so many different jobs on today's cars. Here you see it checking run-out of the converter hub. It may also be used for checking the crankshaft flange when the converter has been removed. Consult your Factory Service Manual for various alignment specifications. Dial is 1¾" diameter, is calibrated in plus or minus .001" graduations, and has .187" maximum travel.



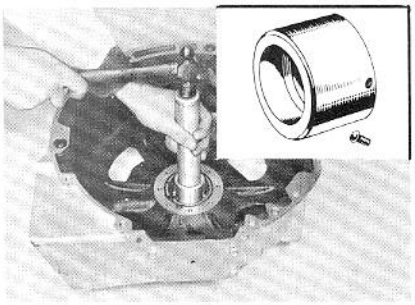
C-3237 C-3303

OIL LINE PLUGS FOR TESTING OIL PRESSURE IN ENGINE OR CONVERTER

C-3237 Expansion, neoprene sleeve-type for Plymouth, Dodge and DeSoto Torque Converters.

C-3303 Solid steel plug-type for Chrysler Torque Converters.

These plugs seal off the oil system of the torque converter from the engine. This makes it possible to more quickly diagnose and correct low oil pressure problems. Use the Miller C-776 Engine Bearing Wear Detector Tank to make usual oil leak tests. The C-776 Tank is illustrated on page 83.

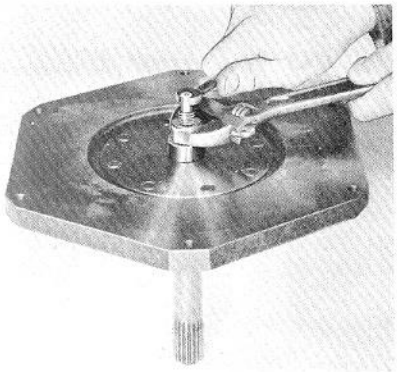


TURBINE SHAFT INSTALLING SLEEVE

C-3183 For all Plymouth, Dodge, DeSoto and Chrysler Engine Oil Fed Type Converters.

SP-1619 Adapter Sleeve Converts C-3124 To C-3183. (Sleeve is removed from driver when servicing Integral Pump Type Converters.)

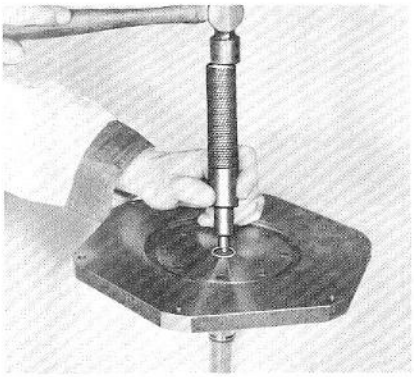
After the turbine shaft bearing has been installed in the converter support plate, the turbine shaft is installed through the use of this special driver as shown. Driver contacts inner race diameter of bearing only to avoid possibility of damage to bearing as it is pressed on turbine shaft.



REGULATOR VALVE SPRING PLUG REMOVER

C-3179 For all Plymouth, Dodge, DeSoto and Chrysler Engine Oil Fed Type Converters.

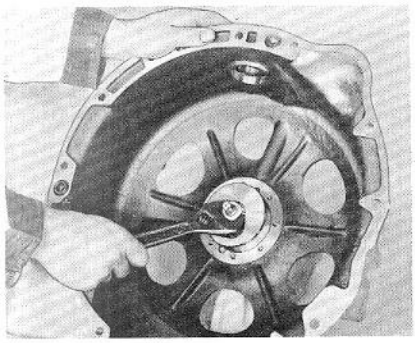
Overheating and lack of power or acceleration may indicate low oil pressure in the Torque Converter. Correction may require removal and servicing of the oil pressure regulator valve spring and ball. This puller removes the plug that retains the regulator spring and ball.



REGULATOR VALVE SPRING PLUG INSTALLING DRIVER

C-3178 For all Plymouth, Dodge, DeSoto and Chrysler Engine Oil Fed Type Converters.

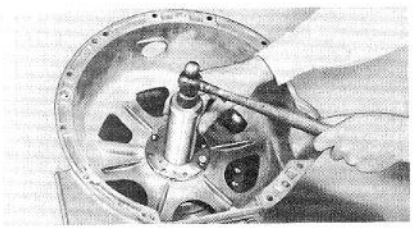
Torque Converter oil pressure is controlled by installing the regulator valve spring retainer plug to the correct depth. A shoulder on this driver automatically and accurately locates the plug when it butts against the flange of the turbine shaft.



TURBINE SHAFT BEARING PULLER

C-3184 For all Plymouth, Dodge, DeSoto and Chrysler Engine Oil Fed Type Converters.

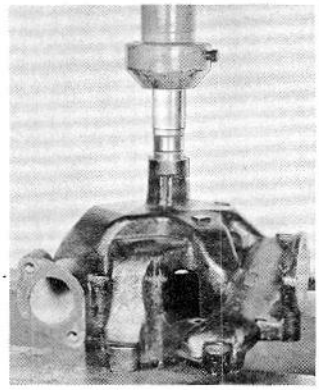
Attempting to drive a damaged turbine shaft ball bearing from the aluminum support plate is almost sure to cause irreparable damage. Be safe—be sure by using this special puller to save time removing the turbine shaft ball bearing.

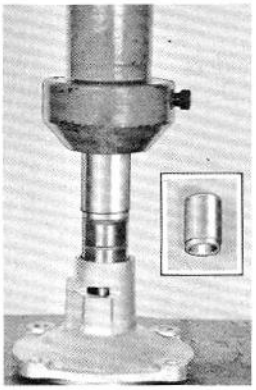


STATOR PLATE INSTALLING DRIVER

C-3192 For all Plymouth, Dodge, DeSoto and Chrysler Engine Oil Fed Type Converters.

There is no equal substitute for a properly fitting driver. Their modest cost is a good investment to insure against lost time caused by attempting to find a suitable piece of pipe to use as a makeshift tool. Having the proper tool at the right time saves not only valuable time but also prevents damaging new parts through improper installation.

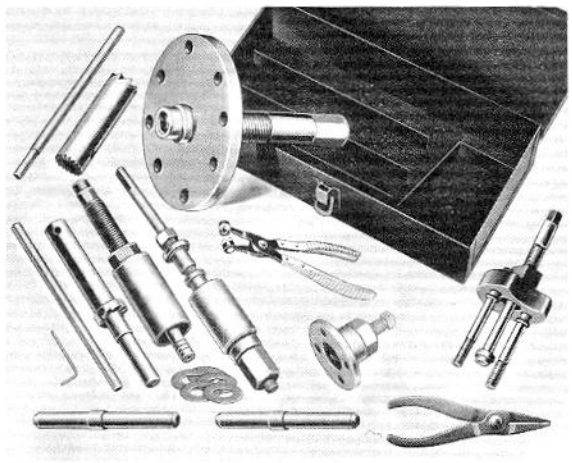




V-8 ENGINE WATER PUMP SHAFT AND BEARING INSTALLER

C-3468 For 1955 and 1956 Plymouth, Dodge and Chrysler V-8.

Use of this inexpensive installing sleeve in an arbor press prevents brinelling of the shaft bearings as the installing pressure is exerted on the outside diameter of the bearing. Driving this shaft and bearing in place with a hammer will usually brinell the bearing and cause a noisy pump.



C-3497 Tool Kit Illustrated.

WATER PUMP SERVICE TOOL KITS

C-3497 For Chrysler-Plymouth and Dodge Truck dealers.

Contains:

C-373	Tool	DD-811	Pilot	C-3208	Remover
C-412	Puller	DD-882	Pilot	C-3250	Pliers
C-551	Refacer	C-3172	Refacer	C-3468	Installer
C-760	Pliers	C-3173	Burnisher		

24 SP-1527 Abrasive Finishing Discs are included with C-551 and C-3172 Refacers.

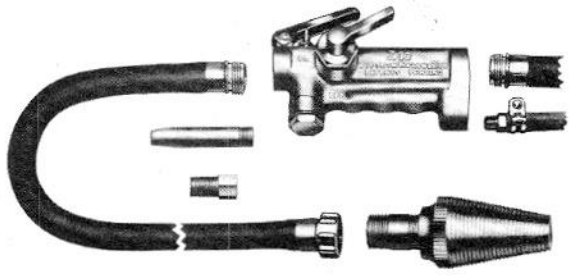
C-3493 For DeSoto-Plymouth and Dodge Car dealers.

C-373	Tool	C-3172	Refacer	C-3250	Pliers
C-412	Puller	C-3173	Burnisher	C-3468	Installer
C-551	Refacer	C-3208	Remover		

24 SP-1527 Abrasive Finishing Discs are included with C-551 and C-3172 Refacers.

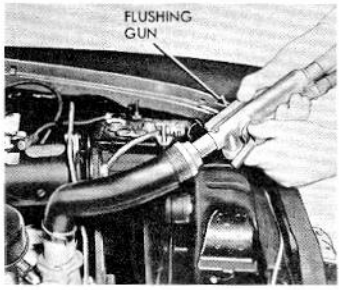
Worn And Leaky Pumps Can Be Rebuilt To Original Operating Efficiency—PROFITABLY

No special skill or equipment, other than these few, small, low-cost, special tools are required to rebuild all current type water pumps in your own shop. Usually this rebuilding work can be done without increasing overhead by fully utilizing available spare time of a tool room attendant.



MX-510 Truck Size Adapter

MX-509 Engine Degreasing Adapter and Hose



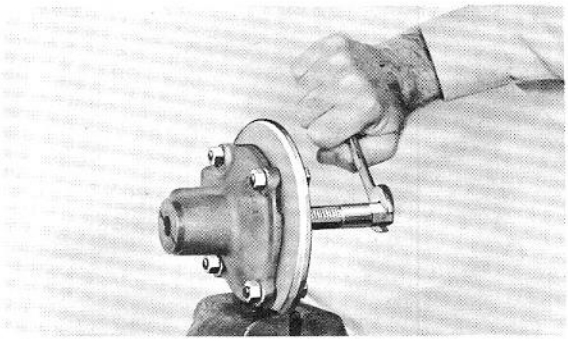
REVERSE FLOW FLUSHER FOR ENGINE COOLING SYSTEMS

C-3514 Complete as illustrated at left. (MX-509 and MX-510 Adapters extra.)

Combines Air and Water For Power Flushing Radiators and Engine Blocks.

The special mixing nozzle attaches to standard air and water connections providing a safe, effective method of power surging water and chemicals through the cooling system. Flushing in the reverse direction to the normal water flow, breaks off rust and scale, allowing it to be safely flushed from the system. Tapered nozzle fits all popular sizes of radiator hoses. Small connector is used for flushing heaters.

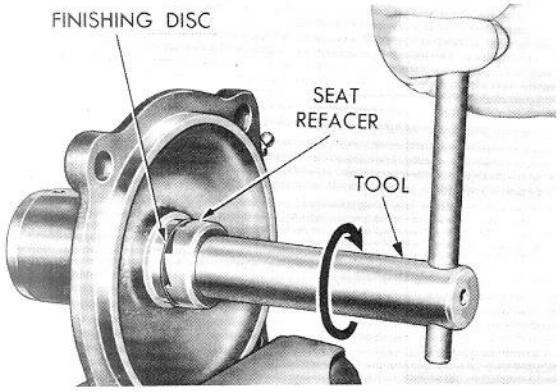
Complete flushing chart is packed with each unit.



WATER PUMP SHAFT BUSHING REMOVER

C-3208 For 1953 and 1954 Dodge V-8, 1952 thru 1955 DeSoto V-8, also Dodge Trucks using these engines.

Both bushings can be quickly and easily removed with this tool as illustrated. A double set of attaching holes allows tool to service both DeSoto and Dodge V-8 engine pumps. Supersedes C-3165 which fits only DeSoto V-8 pumps.



WATER PUMP HOUSING SEAT REFACER

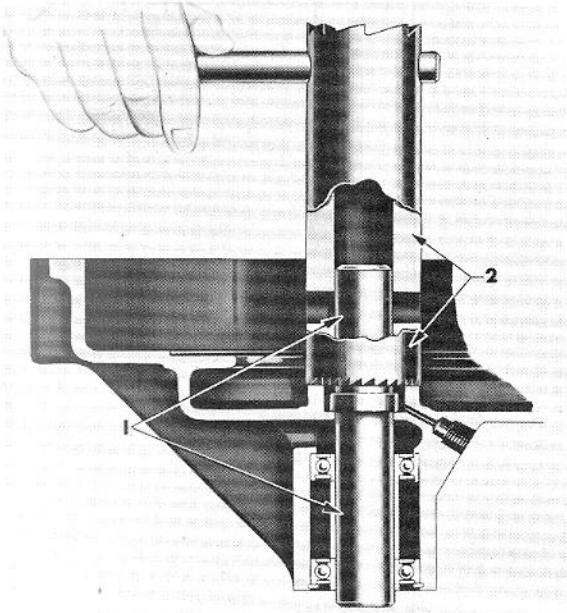
C-3172 For all Plymouth, Dodge, DeSoto and Chrysler Sixes, also 1953 and 1954 Dodge V-8, 1952 thru 1955 DeSoto V-8, and Dodge Trucks using these engines.

This tool partially replaces the former C-384 Combination Refacer and Bushing Burnisher. Elimination of the burnishing operation in this refacer speeds up refacing a pump housing and reduces the effort required. Use Tool C-3173 to burnish new bushings to size before using this Refacer. Twenty-four SP-1527 Abrasive Finishing Discs are included with the C-3172 Refacer.

SPECIAL FINISHING DISCS SHOULD BE USED WITH REFACERS TO POLISH WATER PUMP HOUSING SEAT.

SP-1527 Package of 100 discs.

A longer lasting, water-tight sealing surface is more easily obtained by using one of these special abrasive discs. The disc is used under the refacer cutter to polish the seat after it has been refaced in the usual manner with C-3172 and C-551 or similar refacers.



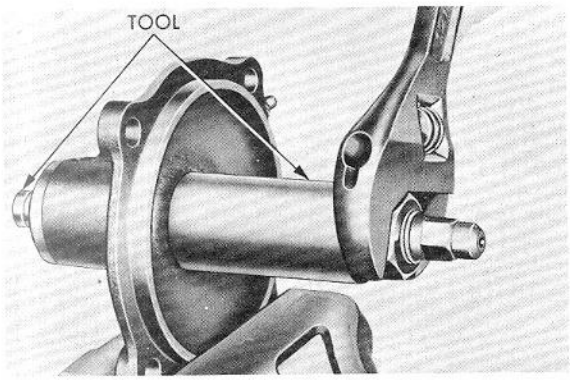
WATER PUMP HOUSING SEAT REFACER

C-551 For 1955 and 1956 Plymouth and Dodge V-8, also 1956 DeSoto and all Chrysler In-line Eights and V-8, and Dodge Trucks using these engines.

The illustration at left shows tool refacing the water sealing surface on a typical pump. The Refacer pilots on the pump shaft, however, on other pumps the shafts may have to be removed and the DD-811 or DD-882 Pilot (shown on page 52) used in the bearings to align the refacer.

Best results are obtained by revolving this refacer with the palm of one hand on the end of the handle with a slight constant pressure. Refacer will then turn the water pump shaft, machining a smooth, flat seat and automatically "clear" itself as the seat is finished.

The refacer has a coarse tooth cutter on one end for rough finishing and a fine tooth cutter on the opposite end.

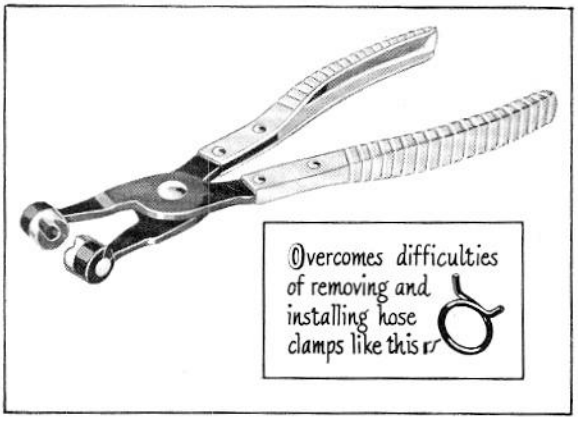


WATER PUMP BUSHING BURNISHER

C-3173 For all Plymouth, Dodge, DeSoto and Chrysler Sixes, also 1953 and 1954 Dodge V-8, 1952 thru 1955 DeSoto V-8, and Dodge Trucks using these engines.

New bushings should be installed with tool C-373, see page 52. (A large SP-1532 washer is now included with C-373 tools to protect Bushing Flange on this type pump.) This Burnisher should then be pressed through the new bushings.

It will swedge them tight in the housing and as the Burnisher is removed as shown with the large hexagon nut, the bushings will be accurately burnished to size.

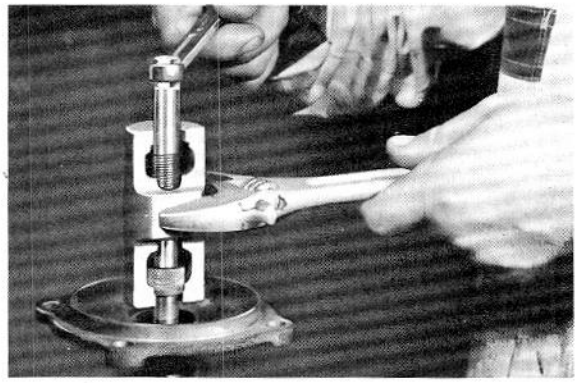


HOSE CLAMP PLIERS

C-3250 For all sizes of self-tightening spring wire hose clamps.

Removes And Installs Radiator And Heater Hose Clamps—has 180° Swivel Jaws

Here's the answer to mechanic's demand for a practical tool to service this wire type clamp, even when in deep, hard-to-get-at locations. Deep slots in jaws hold clamp ends securely — they then swivel to allow clamp to be turned to most convenient angle for installation. Jaws completely close and can therefore fully expand even small size clamps. Long 8½" handles provide ample leverage to easily service large and small clamps.

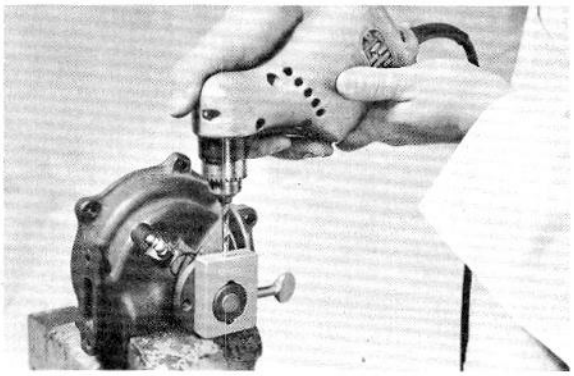


WATER PUMP IMPELLER HUB INSERT PULLER

C-3476 For 1955 and 1956 Plymouth, Dodge, DeSoto and Chrysler Engines.

Pulls Steel Insert Off Shaft After Worn Plastic Impeller Is Broken Away.

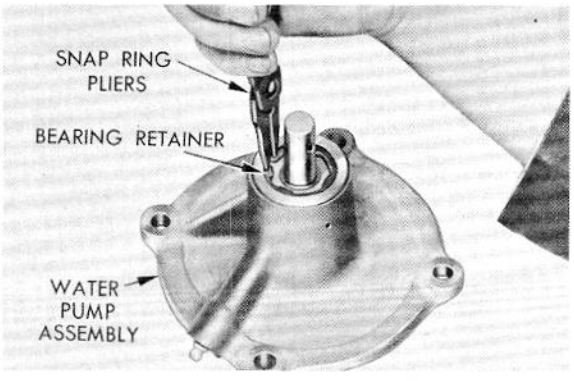
This single, double end tool safely and quickly pulls the two different sizes of steel inserts off the shaft as illustrated. The plastic impeller has been broken away from insert.



WATER PUMP FAN HUB LOCK PIN DRILL JIG

C-783 For all Plymouth, Dodge, DeSoto and Chrysler water pumps.

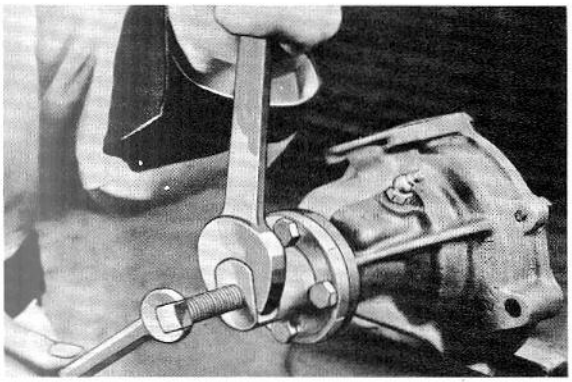
Use of this jig will save time and help assure a tight properly adjusted pump when relocating the fan hub. Often the fan hub lock pin is reinstalled in its orginal drilled hole because it is too difficult or troublesome to drill a new hole. This simple jig overcomes both of these former problems.



WATER PUMP SHAFT BEARING RETAINER SNAP RING PLIERS

C-760 For all Chrysler In-line Eights.

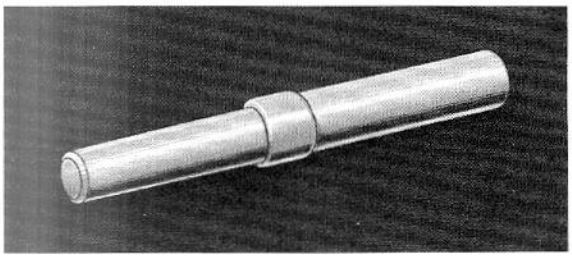
The snap ring which holds the water pump shaft bearing in position on this model pump is of a new special type easily and safely removed and installed with these inexpensive special pliers. They are much faster and easier used than ordinary needle nose pliers.



WATER PUMP HUB PULLER

C-412 For all Plymouth, Dodge, DeSoto and Chrysler cars.

This small inexpensive tool will save its cost many times over in time and material saved. Attaches to water pump fan hub with fan blade bolts. Its use avoids shearing water pump impeller pin or damaging impeller when disassembling pump. Be sure to remove fan hub dowel pins before attempting to remove hub.

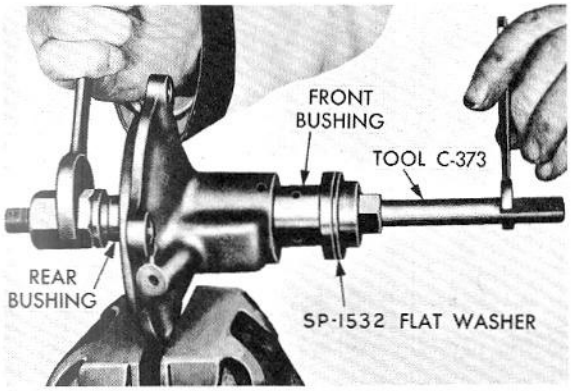


WATER PUMP REFACER PILOTS

DD-811 Pilot size .588". For early model Dodge 3 ton Truck and Chrysler Straight 8 engines.

DD-882 Pilot size .668". For later model Dodge 3 ton Truck and Chrysler Straight 8 engines.

These pilots fit the ball bearings used in the larger water pumps as shown in illustration of C-551 water pump housing seat refacer on page 50. They provide a rigid properly aligned pilot to guide the C-551 Housing Seat Refacer. C-551 Refacer pilots directly on water pump shaft on other models.



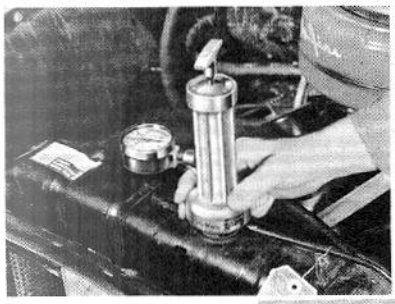
BUSHING PULLER AND REPLACER

C-373 For all Plymouth, Dodge, DeSoto and Chrysler Sixes, also 1953 and 1954 Dodge V-8 and Dodge Trucks using these engines.

The illustration at the left shows how simply this tool is used to install **both** water pump shaft bushings simultaneously on current model pumps.

A C-373-8 shoulder adapter is used when assembling and locating the inner bushing, and a plain adapter (no shoulder) C-373-2 is used when removing this bushing on earlier model pumps.

Correct bushing location is indicated on earlier model pumps when ground surface or large installing nut lines up with inner line of special groove machined in the puller screw.



Checks Radiator and Entire System.

Checks Caps Separately.

C-3499
Packed in Metal Case

PRESSURIZED COOLING SYSTEM AND CAP TESTER

C-3499 Tester with cap adapter for cars and light trucks.

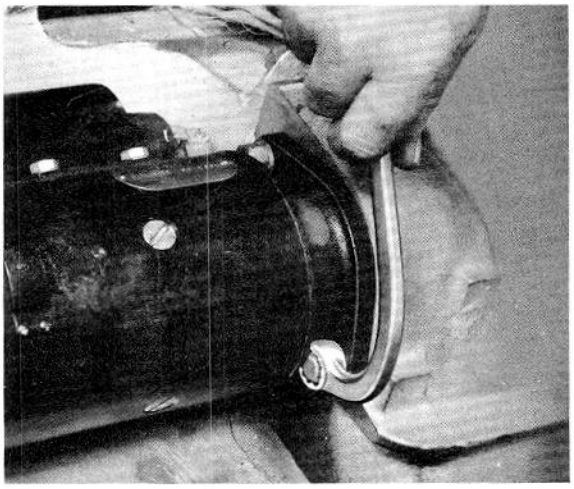
DD-1228 Tester complete with adapters for cars and trucks. DD-1229 Truck Adapter only.

Pin-Points Internal And External Leaks In Entire Cooling System.

Easily operated cylinder pump snaps on radiator filler neck and safely pressurizes entire system. Coolant is then forced out any minute opening that will leak when system becomes pressurized under driving conditions. Such leaks cannot be quickly detected when attempting to check the system without such a tester. Special instructions are packed with every tester that tell how to detect internal leaks, such as blown head gasket, cracked head, etc., without tearing engine down.

Self-Adjusting To Check Short And Long Neck Filler Caps.

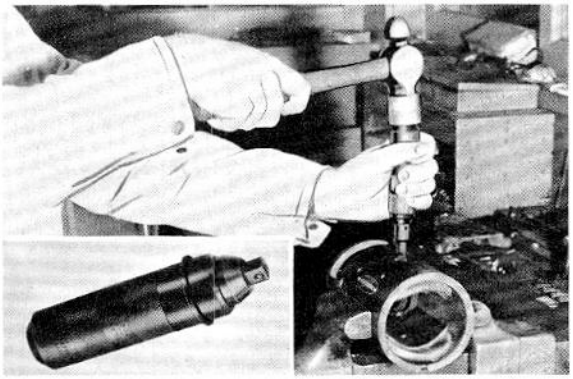
Pressure gauge quickly indicates operating pressures of vent valve in cap and if cap will retain specified pressure.



STARTING MOTOR FLANGE NUT WRENCH

C-455 For all models including V-8 engines.

Ordinary wrenches will not reach into the limited space necessary to contact the starting motor flange nuts. This is a double end wrench that easily drops in the correct position to be used either from under the car or from topside.

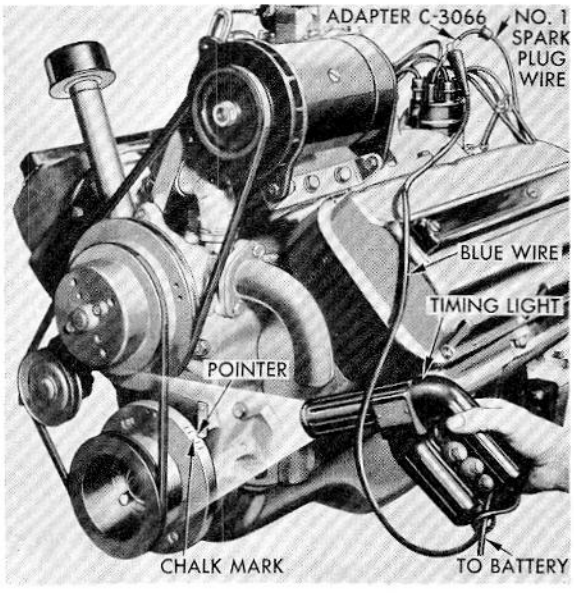


GENERATOR AND STARTING MOTOR FIELD COIL SCREW IMPACT TOOL

C-3475 Impact Head Only — use with standard ⅜" square drive impact type socket wrench attachments.

New — Fast — Simple Method Safely Removes Tightest Screws

Here at last is a safe, sure means of removing the large screw which secures the field coil on most all types of electrical motors and generators. By merely grasping the tool and keeping either tightening or loosening tension on it, you can remove or install the tightest screw with light sharp hammer blows. Tool has unlimited applications. When fitted with heavy-duty Philips screwdriver bit it is an ideal tool for removing car door hinges.



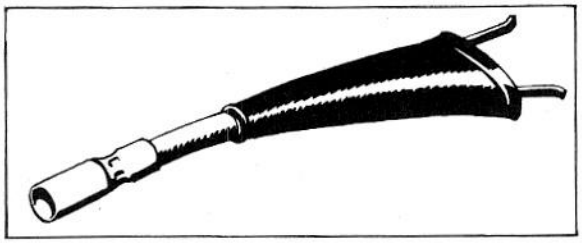
IGNITION TIMING LIGHTS—IN 6 VOLT AND COMBINATION 6 & 12 VOLT MODELS

C-693 Standard 6 volt model.

C-3442 Combination 6 and 12 volt model.

Also Checks Automatic Vacuum Spark Advance Mechanism.

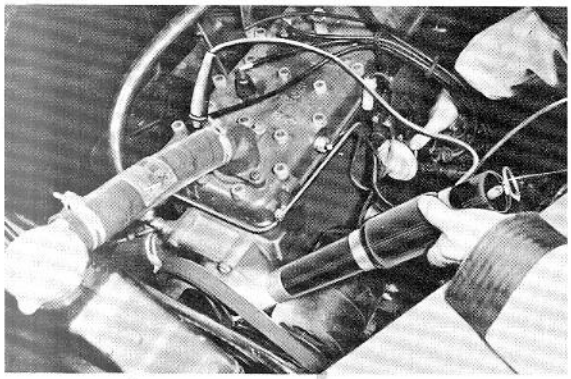
This type of timing light has become the most effective means of quickly checking ignition timing. Through a built-in coil, it takes the power from the car's own electrical system and builds it up to produce a bright light that is easily used, even in daylight. Through a connection to the #1 spark plug, the light is synchronized when the engine is running to flash the light on and off. This produces a stroboscopic light that, when pointed at the timing marks on the fan drive pulley, makes the pulley appear to remain stationary and makes it easy to read the timing marks. The distributor can then be rotated while the engine is running to line up the proper timing marks with the indicator pointer as illustrated.



TIMING LIGHT CONNECTOR FOR V-8 ENGINES

C-3066 Can be used with any timing light.

Connector fits into No. 1 spark plug terminal tower of distributor and provides easy method of attaching timing light on all engines with concealed spark plugs. Attempting to force a makeshift metal connector in distributor terminal tower may fracture distributor cover.

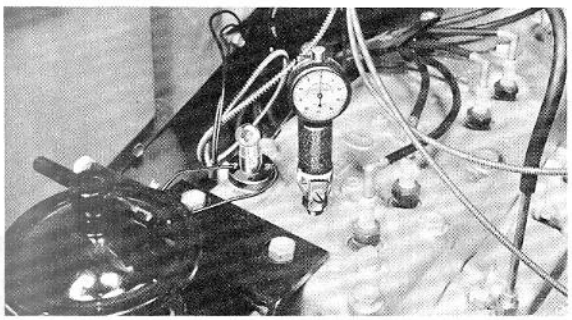


COMBINATION 6 & 12 VOLT STROBOSCOPIC TIMING LIGHT

C-863 For all cars and trucks.
See previous page for special V-8 Connector Adapter.

Has Built-In Compensator That Automatically Adjusts For 6 or 12 Volt Current

This new light is a direct development of the Strobotron tube, whose intense, instantaneous flash makes it possible to photograph a bullet in flight. The brilliant, bluish-white concentrated light of this unit is many times brighter than the old neon type lights, and makes timing marks easy to read. Complete operating instructions packed with each light. Long slim body makes light easy to reach into limited access locations.



C-435 BEING USED ON IN-LINE ENGINE

ENGINE IGNITION AND VALVE TIMING INDICATOR

C-435 For all Plymouth, Dodge, DeSoto and Chrysler engines except V-8's.

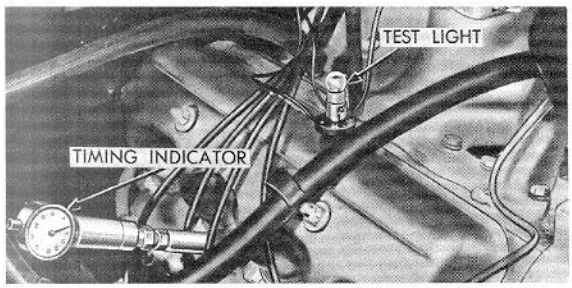
C-3075 Includes C-435 and Adapter for servicing V-8 Engines.

Accurately Checks Top-Dead-Center From Top Of Piston.

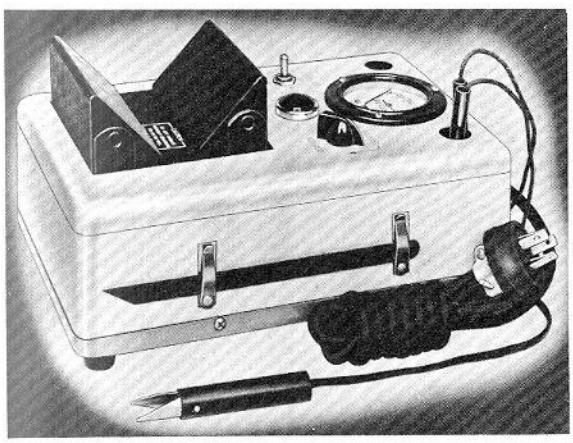
These indicators will accurately check the exact location of the piston so that both ignition and valves can be timed in accordance with original engine specifications. This often is necessary when the timing pointer is bent or broken off or if the impulse neutralizer is incorrectly installed.

The C-435 Indicator screws directly into the timing plug opening over No. 6 piston on all in-line engines. The C-3075 Adapter screws into the spark plug opening as illustrated.

A small test light is supplied and, when connected to the distributor, will indicate the exact instant the breaker points open and close so that ignition timing can be adjusted to exact factory specifications. Timing lights cannot be effectively used on Dodge Routevans — be sure to use this type of gauge.



C-3075 IN USE ON V-8 ENGINE



MODEL 313 COMPLETE WITH A.C. METER, TEST LAMP AND PRODS ILLUSTRATED ABOVE

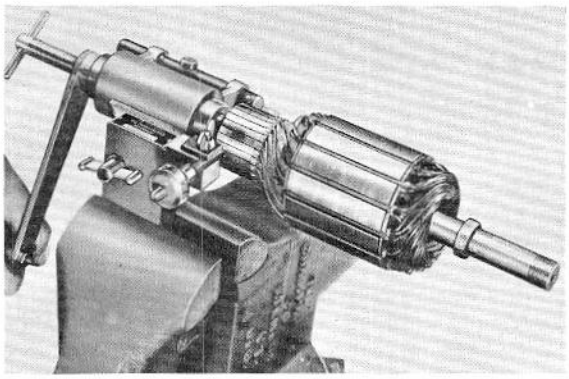
ARMATURE TESTING GROWLERS

E-312 Standard Model without A.C. meter.

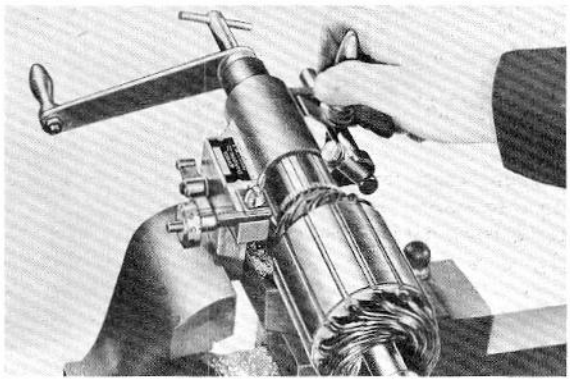
E-313 Deluxe Model as illustrated.

Also Tests Field Coils And Brush Holder Plates.

Every electrical service department needs a dependable growler to test open or shorted windings, high resistance connections, grounded terminals, etc. E-313 deluxe growler will also test for reversed coils and incorrect number of turns. Test lamp and prods check grounded windings, field coils and circuit continuity. Both models are finished in durable, two-toned, baked enamel and will service armatures from 1⅛" diameter to the largest automotive units.



TURNING ARMATURE



UNDERCUTTING MICA

ARMATURE TURNING AND UNDERCUTTING TOOL

C-770 For all Starter and Generator Commutators.

A Low-Cost Effective Tool—Eliminates Need For Expensive, Seldom Used Lathe.

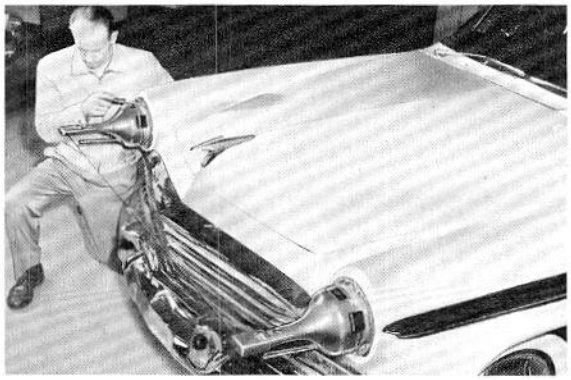
This fast acting turning tool is accurately installed and locked on the armature shaft with a ground adjustable collet. This assures accurate centering of the armature in the threaded spindle of the tool. Turning the crank handle in a clockwise direction turns the complete armature and automatically feeds the tool bit across the commutator. Feed screw has 104 threads per inch, providing a smooth turned finish. Several light machine cuts are better than one heavy cut as this eliminates folding the copper over into the mica groove. Undercutting the mica insulation is easily and quickly accomplished as illustrated. Replacement undercutting saws are available.

COMBINATION ELECTRICAL TACHOMETER AND CAM ANGLE DWELL METER

DD-1150 For all 6 and 12 volt Automotive Service.

Essential For Accurately Setting Transmission Governors, etc.—Is Self-Contained, Ideal For Road Test Use.

Tachometer has two scales 0-1000 R.P.M. and 0-5000 R.P.M. making it ideal for checking tune-up work, adjusting governors, checking automatic transmissions, etc. Especially essential for accurate ignition timing on V-8 and truck engines. Accommodates both 6 and 8 lobe cam distributors. Cam angle dwell meter has a single dial for checking all distributors. Meter can be used accurately with engine running or being turned with starter. This is a self contained battery powered unit, ideal for road checking governors, gas mileage, etc.

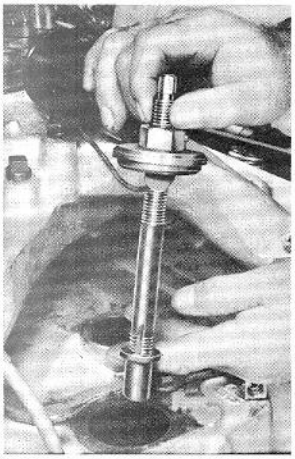


MECHANICAL HEADLIGHT AIMER

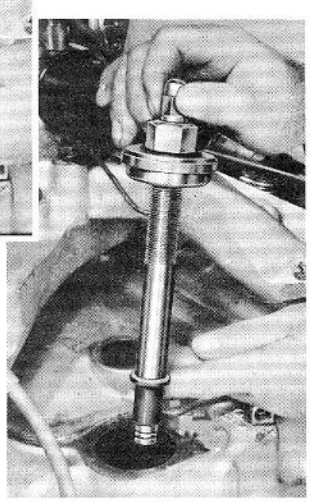
C-3552 Pair. For all cars and trucks.

Individual Aimer For Each Headlight Corrects Both Horizontal And Vertical Aim.

Aimers are made of strong, lightweight plastic with three automatic gripping fingers that center and align the aimer on both the new and older type sealed beam headlights. A compensating adjustment screw levels aimer to the car—eliminating the need of a level floor. Accurate horizontal aiming is obtained by stretching a built-in, self-retracting, elastic cord between the two aimer units. A meter actuated by this cord registers right or left aim. Vertical aim is shown in inches drop at 25 feet on a separate, easily read, bubble type indicator that can be calibrated to the actual floor level.



C-3052 Removing Worn Bushing



C-3053 Installing New Bushing

DISTRIBUTOR DRIVE SHAFT BUSHING PULLER

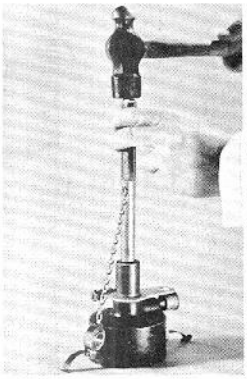
C-3052 For all Plymouth, Dodge, DeSoto and Chrysler V-8 Engines.

Attempting to remove this bushing, which is located deep inside the engine block, with makeshift methods may cause considerable unnecessary extra work. Should a chip be chiselled out of the bushing it would drop onto the camshaft. This easy-to-use tool eliminates any such possible difficulty and saves time too. End of puller screw rolls its own thread in bushing, grasping it firmly and safely. Puller nut and head then pull bushing.

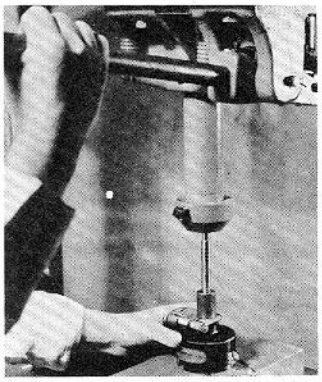
DISTRIBUTOR DRIVE SHAFT BUSHING DRIVER AND BURNISHER

C-3053 For all Plymouth, Dodge, DeSoto and Chrysler V-8 Engines.

This is a dual purpose tool—it is used as a driver to install a new bushing, and to burnish the bushing in position to the proper size. As the burnisher is pulled from the bushing with the pressure nut and guide plate, it also swedges the bushing tight in its counterbore. Do not attempt to ream this bushing.



INSTALLING BUSHING

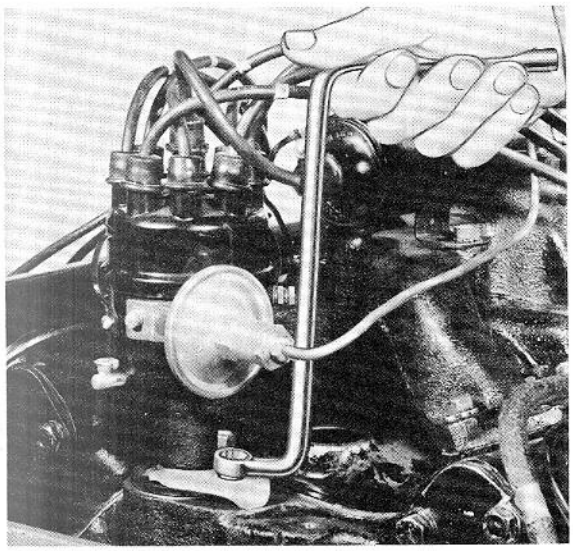


BURNISHING BUSHINGS

DISTRIBUTOR DRIVE SHAFT BUSHING DRIVER AND BURNISHER

C-3041 For all Plymouth, Dodge, DeSoto and Chrysler in-line and V-8 engines.

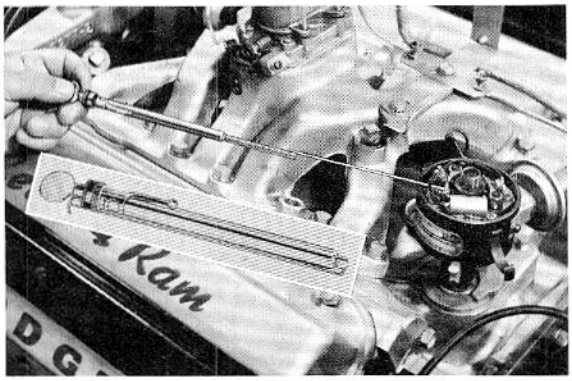
The driver and adapter safely install both the upper and lower bushings as shown. The adapter button has a step on it to allow the upper bushing to be driven below the inside bore of the distributor. The opposite side of the adapter will drive the lower bushing flush with the bottom face of the distributor. Remove both bushings by using driver only. The burnisher is pressed through both bushings, swedging them tightly in place while finishing them to size.



DISTRIBUTOR LOCK PLATE STUD WRENCH

C-3419 For all 1955 and 1956 Plymouth, Dodge, DeSoto and Chrysler V-8 Engines.

Engine tune-up mechanics find this simple, low-cost wrench a very helpful time saver to conveniently reach this stud when resetting the distributor. Limited access makes it difficult to use any combination of a standard socket and attachments. Attempting to use such standard wrenches consumes extra time and often rounds off the corners of the stud.



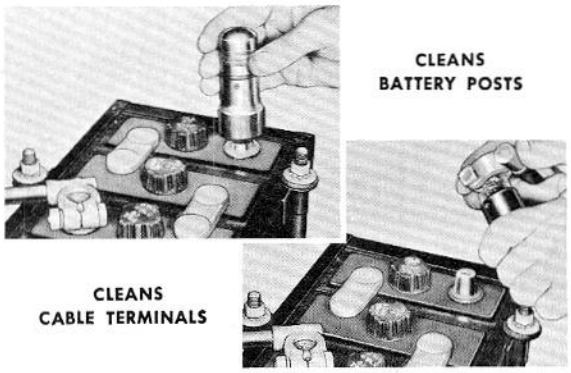
SPRING TENSION CHECKING SCALES

MTU-35 Scale graduated 0 to 12 ounces.

MTU-36 Scale graduated 0 to 48 ounces.

Ideal for Checking Point and Brush Springs

Your electrical service department will operate more efficiently and will be better able to check delicate electrical contact points and springs if equipped with these spring tension testers. The MTU-35 is especially useful for checking voltage and current regulator points. The MTU-36 has a wide variety of uses such as checking distributor point tension, generator and starting motor brushes, relays, etc. Both fold into conveniently carried pencil-type design as shown in insert.

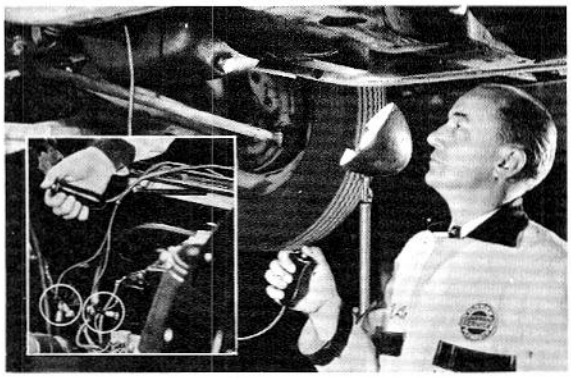


DOUBLE END WIRE BRUSH

MX-75 Brush complete with metal cap.

Cleans Cable Terminals and Battery Posts

Each of your battery service men should have one of these handy Double End Metal Brushes. A few turns of this brush and battery post is reshaped and cleaned like new.

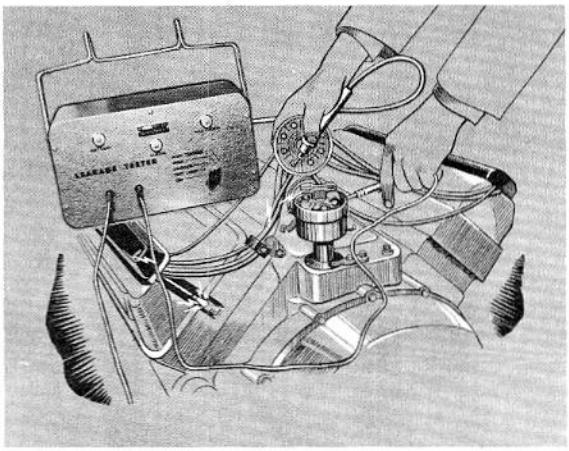


REMOTE CONTROL STARTER SWITCH

C-763 Complete with 6 foot cable.

Saves Extra Man on Many Checking Jobs

Your mechanics will save time fitting pistons, replacing bearings, etc. when they use this switch to turn the engine over without "getting out from under." The automatic cut-off switch is well insulated in a wooden hand grip and the long two wire cable is fitted with alligator type connectors. Insert illustration shows how easily connectors can be installed on any convenient "Hot" terminal.



ELECTRICAL LEAKAGE DETECTOR

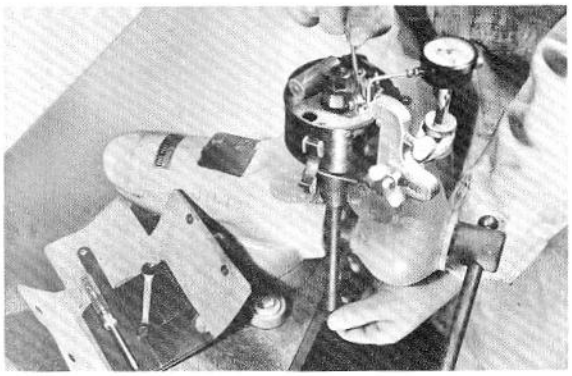
C-3296 110 volt, 60 cycle model for all cars.

Does Not Duplicate Any of Your Present Electrical Test Equipment!

Locates high tension leaks fast—right on the vehicle. Just remove distributor cap, attach tester leads and you can instantly locate where a spark plug wire may be pinched and grounded, which spark plug needs replacing, etc. All without unnecessary removal of wiring harness covers, sparks plugs, etc.

Safely Smokes Out Defective Insulation!

Illustrated manual supplied with each tester shows how to make many useful tests, including how to find a thin spot in a headlight lead. By setting tester control knob at "High", harmless smoke or buzz develops at point of trouble, instantly pin-pointing exact spot where trouble has developed. Tested and found harmless to insulation by qualified electrical engineers.

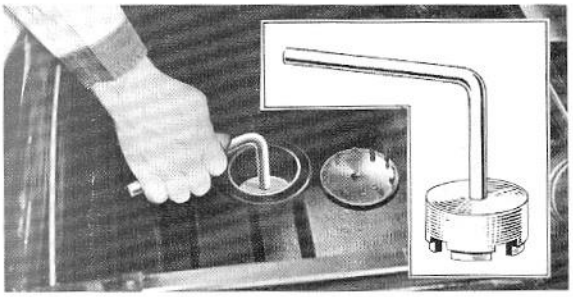


DISTRIBUTOR POINT GAP DIAL INDICATING TOOL

C-707 Complete with dial indicator.

C-707-A Tool less dial indicator.

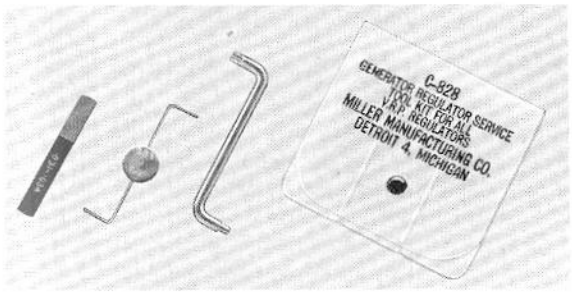
Increased speed, gas economy and general all 'round engine performance is often possible by more accurate distributor and point adjustments. By using this special jig, you can increase the ease and speed of more accurate distributor adjustments by using your standard dial indicator as shown. Jig fits all Auto-Lite and most other makes of distributors. Also ideal for checking wear in distributor shaft bushings.



FUEL TANK GAUGE RETAINER NUT WRENCH

DD-1170 For all 1949 through 1956 Plymouth, Dodge, DeSoto and Chrysler cars, also 1948 through 1956 Dodge trucks.

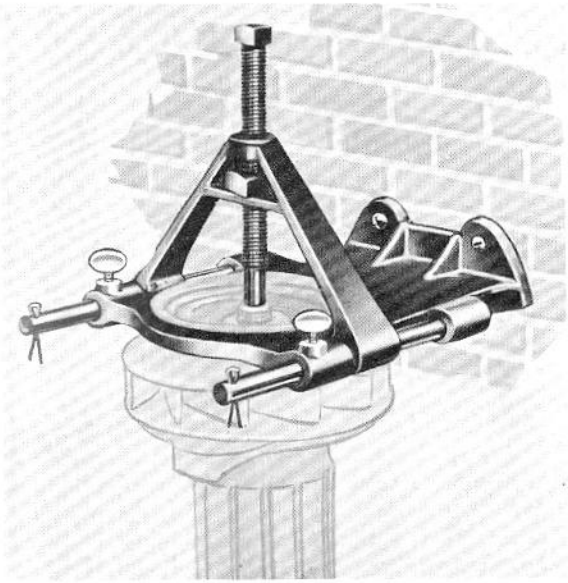
The fuel tank gauge unit is held in place on these cars and trucks with a special retainer that requires downward pressure at the same time as it is revolved in order for it to be removed or installed. This special wrench makes it easy and safe to reach and unlock or lock this retainer through the chassis floor or truck seat frame.



GENERATOR REGULATOR SERVICE TOOL KIT

C-828 For servicing All V.R.P. Regulators.

The circuit breaker, current regulator and voltage regulator can all be accurately adjusted to recommended specifications with this simple, three-piece tool kit. The spring hanger clip bending tool is double ended. Machined slots in each end are 90° apart to make it easy to use in limited access areas. The flat .031" and .034" gap gauge combined with the .048" and .052" wire gauge make this kit very helpful to all tune-up men.



GENERATOR PULLEY PULLER

C-3505 For all cars.

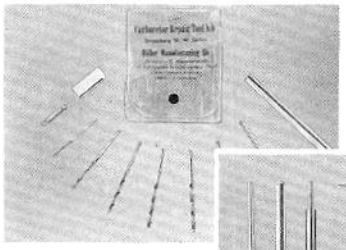
Mounts Permanently to Wall— Essential for Generator Exchange Service

Mount this special tool handy to your electrical service department and you'll provide a faster and safer method of changing generator pulleys. Because generator pulleys are usually of a light, stamped metal design, this tool is especially effective. It does not rely on pressure alone—a sharp, light hammer blow on the puller screw will often "shock" a pulley loose, where steady pressure will bend the pulley before it comes off. Sliding jaws accommodate 3" to 5" outside diameter pulleys.

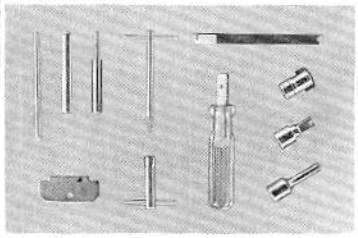
C-880

For all Carter carburetors used up to 1954 on 6 cylinder Plymouth, DeSoto and Chrysler engines. Illustrated Above—Contains Following:

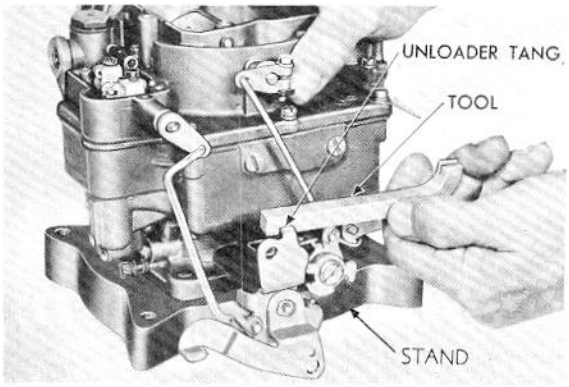
TB-104	Tool Box	T-109-69	Double Hex Socket (9/16")
T-109-41	Adjusting Bar	T-109-73	Wrench (for step up piston)
T-109-49	Float Level Gauge (1/32" x 1/16")	T-109-75	Ring Inserter and Bending Tool
T-109-50	Float Level Gauge (5/64" x 7/64")	T-109-1175	Universal Pump Stroke Gauge
T-109-51	Grip Handle for Sockets	T-109-148	Float Level Gauge (5/32")
T-109-53	Handle Bar (for grip handle)	T-109-172	Double Hex Socket (7/16")
T-109-56	Ball retaining ring removing tool	T-109-173	Main Metering Jet Removing Tool
T-109-57	Screw Driver Bit (5/16" blade)	T-109-185	Governor Adjusting Wrench
T-109-58	Screw Driver Bit (¼" blade)	T-109-195	Main Vent Tube Tool
T-109-59	Screw Driver Bit (3/16" blade)	T-109-210	Rivet Extractor
T-109-64	Double Hex Socket (5/16")	T-109-272	Main Vent Tube Tool



C-3451 Kit



C-3236 Kit



CARTER CARBURETOR SERVICE TOOL KITS

C-3474

For all 1951 thru 1956 Chrysler, DeSoto and Plymouth cars with Carter one, two and four barrel carburetors.

Contains:

T-109-22	Bending Tool	T-109-193	Gauge .040" to .054"
T-109-28	Float Gauge 3/16"	T-109-197	Float Gauge 1/16"
T-109-29	Gauge .020" to .030"	T-109-200	Gauge .010" to .012"
T-109-31	Float Gauge ¼"	T-109-205	Float Gauge 11/64"
T-109-34	Float Gauge 9/64"	T-109-213	Bending Tool
T-109-41	Bending Tool	T-109-214	Bending Tool
T-109-44	Gauge .015" to .018"	T-109-222	Float Gauge 3/16"
T-109-58	Screw driver Bit ¼"	T-109-232	Float Gauge ⅛"
T-109-106	Float Gauge 7/32"	T-109-239	Float Gauge 9/32"
T-109-166	Unloader Gauge 11/64"	T-109-242	Velocity Valve Clearance Gauge 27/64"
T-109-173	Jet Wrench		

C-3467

For 1955 and 1956 DeSoto V-8s equipped with Carter four barrel carburetors.

Contains:

T-109-28	Unloader Gauge 3/16"	T-109-197	Float Gauge 1/16"
T-109-41	Bending Tool	T-109-200	Gauge .010" to .012"
T-109-44	Gauge .015" to .018"	T-109-213	Bending Tool
T-109-58	Screw Driver Bit ¼"	T-109-222	Float Gauge 3/16"
T-109-173	Jet Wrench	T-109-232	Float Gauge ⅛"

C-3456

For 1955 and 1956 Dodge V-8s equipped with Carter four barrel carburetors.

Contains:

T-109-29	Gauge .020" to .030"	T-109-213	Bending Tool
T-109-41	Bending Tool	T-109-214	Bending Tool
T-109-58	Screw Driver Bit ¼"	T-109-222	Float Gauge 3/16"
T-109-166	Unloader Gauge 11/64"	T-109-232	Float Gauge ⅛"
T-109-200	Gauge .010" to .012"	T-109-242	Vel. Gauge 27/64"

C-3099

For 1951 and First Series 1952 Chrysler; also first series 1952 DeSoto V-8 cars equipped with Carter two barrel carburetors.

Contains:

T-109-22	Bending Tool	T-109-106	Unloader Gauge 7/32"
T-109-41	Bending Tool	T-109-193	Gauge .040" and .054"
T-109-44	Gauge .015" and .018"	T-109-205	Float Gauge 11/64"

Every shop should have these specialized tools to safely and efficiently remove old and install new delicate carburetor parts.

STROMBERG CARBURETOR SERVICE TOOL KITS

C-3451

For 1955 and 1956 Dodge 6 and V-8; also Plymouth 6 equipped with Bendix Stromberg two-barrel carburetors. This set required in addition to C-3236 for these Models.

Contains:

T-25863	Bending Tool	T-25906	Calibrated Spring
T-25864	Weight	SP-2778	Set of 7 drills

C-3236

For 1953 and 1954 Dodge V-8's equipped with Bendix Stromberg two barrel carburetors.

Contains:

T-109-213	Bending Tool	T-42	Handle
T-19099	Plug Remover	T-25047	Shaft Wrench
T-24924	Jet Remover	T-25568-1	Remover & Installer
T-24733	Bending Tool	T-25568-2	Remover & Installer
T-24967	Jet Remover	T-25569	Float Gauge
		T-25570	Unloader Gauge

CARBURETOR REPAIR STAND

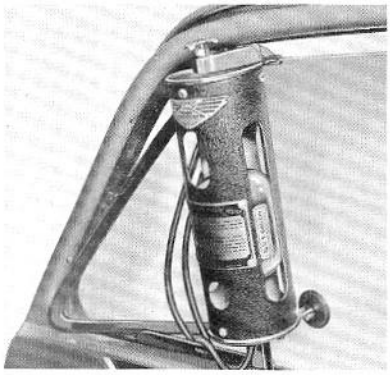
C-3400

For all Plymouth, Dodge, DeSoto and Chrysler four barrel V-8 carburetors.

C-3225

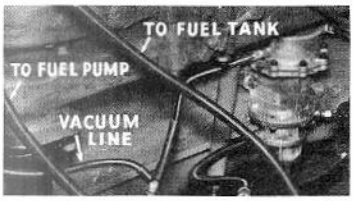
For Plymouth and Dodge two barrel carburetors

Use of these simple aluminum repair stands will prevent accidental bending of critical levers and external controls that extend beyond the flat face of the carburetor flange. Cut-away design allows ample working room for all necessary adjustments.

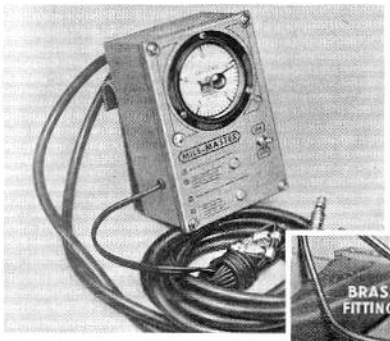


Safely Hangs On Right Front Door Glass—Has No Opening Into Car—Cannot Accidentally Spill Gas In Car.

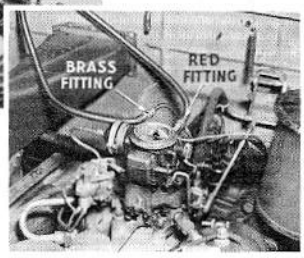
Rugged—Will Not Break Even When Dropped On Concrete Floor.



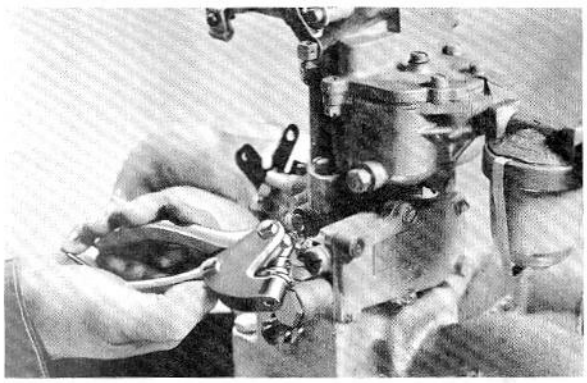
Connects Directly To Fuel Pump—Fills Automatically By Engine Vacuum.



Hangs On Either Door Glass—In Full View Of Customer And Service Man Or Salesman.



Connects Direct To Carburetor—One Man Operated.



GASOLINE MILEAGE TESTER (Vacuum Fill Type)

DD-425 For all cars and trucks.

Low-Cost Accurate Tester—Can Be Effectively Used For Selling New Car Economy Also For Settling Service Complaints.

You can provide positive proof of actual gasoline mileage to any critical customer with the use of this 1/10th gallon tester. It hooks over right front door glass and is firmly held in position with two large vacuum cups. Connects into fuel system between fuel tank and fuel pump so that all gas used in test must pass through tester in full view of customer. Fills automatically by engine vacuum. Can be shut off with simple valve when not in use. Does not interfere with use and operation of car. This type of gravity flow tester is the most economical, accurate design available. It must be connected ahead of the fuel pump so that gasoline enters the carburetor under normal pressure. Connecting direct to carburetor usually will produce inflated and inaccurate gas mileage results. Also available in Imperial gal. and Metric calibrated models at a slight extra cost.

GASOLINE MILEAGE TESTER (Electric Diaphragm Type)

C-3174 For all cars and trucks.

Requires Only 3 Easy-To-Make Connections—Takes Less Than 5 Minutes To Install.

Here at last is a dependable—accurate gasoline mileage tester—that connects directly to the carburetor! A built-in, electrically operated diaphragm allows gasoline to flow through the tester without changing the fuel pump pressure on the carburetor. Accurate mileage tests can be made at all practical speeds and under most every conceivable condition. Dial is graduated in 1/100 U. S. gallons and registers ½ gallon per revolution. A buzzer sounds as dial registers 1/10 gallon, making it easy to use speedometer for usual 1/10 gallon mileage test. Tester hooks over door glass as illustrated, and does not interfere with normal operation of car when not in use. Operates on 6 or 12 volt systems.

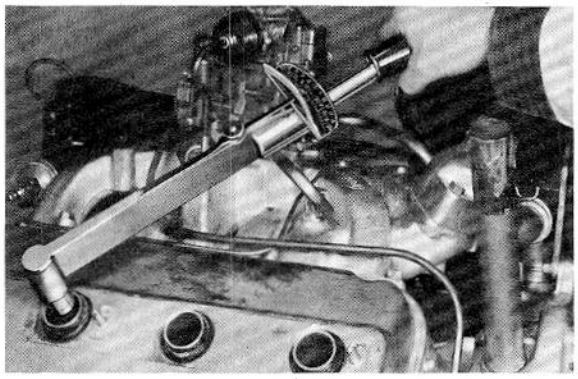
Owner Proves His Own Gas Mileage While Service Man Shows Him How To Get Maximum Mileage Thru Improved Driving Methods.

The use of either of these testers provides an excellent opportunity of building good will for a dealership. They prove visually how fast acceleration consumes gas fast, and how more moderate driving will produce more miles per gallon.

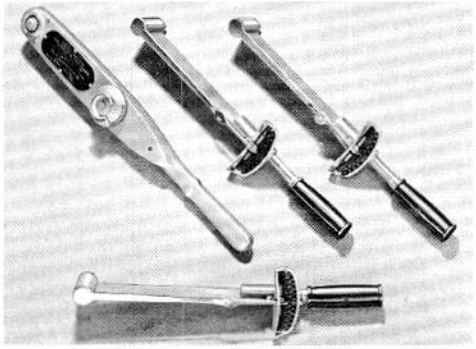
GOVERNOR RE-SEALING PLIER PRESS

DD-1078 For All Governors.

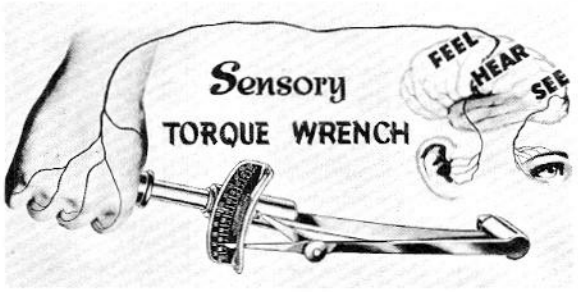
When it becomes necessary to break the original governor seal and re-adjust the governor, be prepared with this simple hand press to re-seal the governor and protect your customer's vehicle from unskilled tampering. Each press supplied complete with 10 plain seals and wires, together with DP/CD engraved die.



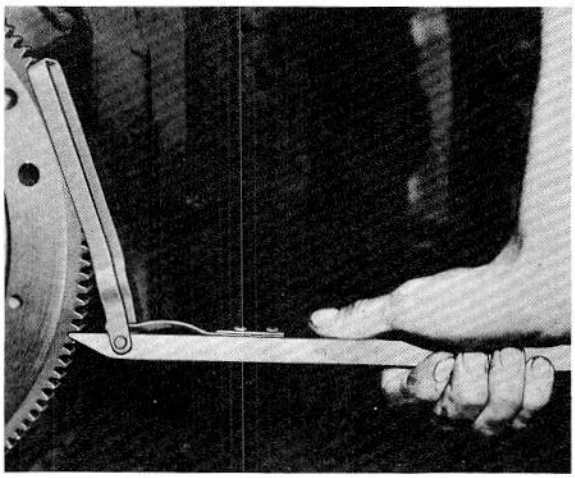
Spark Plugs Are Only One Of Many Important Units That Require ACCURATE Torquing.



Modern Shops Need Various Sizes of Wrenches.



SENSORY* Type Offer 3-Way Torque Signal.



PROPER SIZE TORQUE WRENCHES ARE ESSENTIAL FOR MAKING MANY VITAL ADJUSTMENTS

Cylinder head nuts—exhaust manifold nuts—pinion shaft nuts—spark plugs—power steering adjustments—automatic transmission band adjustments, etc. are only a few of the spots where accurate, dependable torque measurements are essential on current cars and trucks. Not all of these adjustments can be made with the same size or design of wrench. It is just as important to select the proper size and design of torque wrench for each specific operation as it is to use a pair of micrometers to measure thousandths of an inch and an inch scale to measure inches.

Flat Beam Wrenches Are Rugged and Dependable—Need No Special Care

C-485 Heavy-duty 175 foot-pound dial-type with 5 ft.-lb. calibrations. For cylinder head nuts, rear axle adjustments, etc.

C-524 Flat beam 100 foot-pound standard model with 10 ft.-lb. calibrations. For cylinder head nuts, spark plugs, etc.

C-685 Flat beam 300 inch-pound standard model with 12½ in.-lb. calibrations. For power steering, pinion turning torque, etc.

C-3005* Flat beam 100 foot-pound **SENSORY*** model with 10 ft.-lb. calibrations.
For same uses as C-524 but can be used in dark or where dial cannot be easily read.

C-3006* Flat beam 300 inch-pound **SENSORY*** model with 12½ in.-lb. calibrations.
For same uses as C-685 but equipped with **SENSORY*** automatic torque signalling feature.

C-3380* Flat beam special 100 inch-pound **SENSORY*** model with 5 in.-lb. calibrations and built-in offset extension. For PowerFlite band adjusting.

SENSORY Model Wrenches Automatically Signal Pre-determined Torque By Sound, Feel and Sight.*

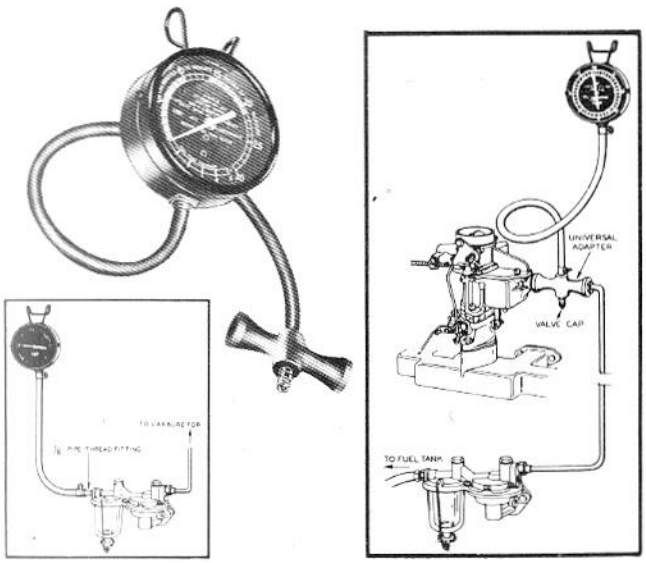
A built-in trigger mechanism on this type of wrench can be adjusted to any desired torque within its range. It will then automatically signal this torque by sight, sound and feel every time the wrench is used. Trigger mechanism automatically cocks itself as the wrench is released for each succeeding adjustment. This type of wrench is, consequently, preferred for production use or where wrench must be used upside down or in the dark where it is impossible to accurately read the calibrated scale.

FLYWHEEL TURNING TOOL

C-771 For All Models.

Save time on clutch repairs, bearing replacements, ring installations and other repair jobs by using this simple one-hand tool. It prevents skinned knuckles and unnecessary crawling out from under the car to turn the engine to the desired position with the crank or starter. Tool hooks to flywheel and allows engine to be rotated in either direction. Spring tension holds it on flywheel always ready for the next turn, and allows mechanic to use both hands for other work. Tool folds for easy storing in mechanic's tool kit.

This tool is a time and labor saver when used with C-3221 Piston and Connecting Rod Assembly Tool illustrated on page 78.



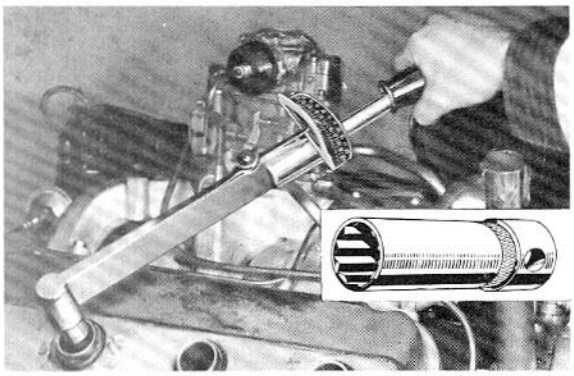
COMBINATION VACUUM AND FUEL PUMP PRESSURE CHECKING GAUGE

C-3411 For checking all carburetors and fuel pumps.

An Essential Diagnosis and Merchandising Tool For Carburetor And Fuel Pump Service.

Fuel pump testing should be an important part of every engine tune-up job. Proper testing with a simple gauge like this often detects a pump that is operating considerably below standard. Replacing such pumps before complete failure occurs will result in added service profits and customer good will. Built-in valve of universal carburetor adapter allows an easy, accurate method of checking fuel pump delivery against factory specifications.

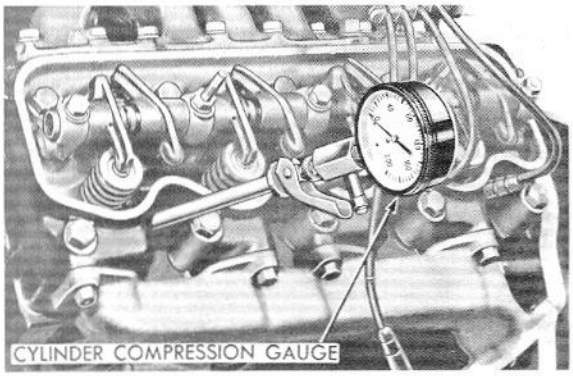
Vacuum sides of gauge provide a dependable method of checking a great variety of engine conditions such as sticky valves, late ignition timing, leaky head gaskets, leaky manifolds, carburetor adjustments, weak valve springs, etc.



DEEP THIN-WALL SPARK PLUG SOCKET

C-3054 For all Plymouth, Dodge, DeSoto and Chrysler V-8 engines.

Be sure to have this thin-wall deep socket to safely reach into the deep receptacles and counterbores of these modern engines for removing and installing spark plugs. Attempting to use makeshift wrenches usually results in broken porcelains and other accidental damage that is easily avoided with these deep sockets that fit all ½" standard wrench attachments.



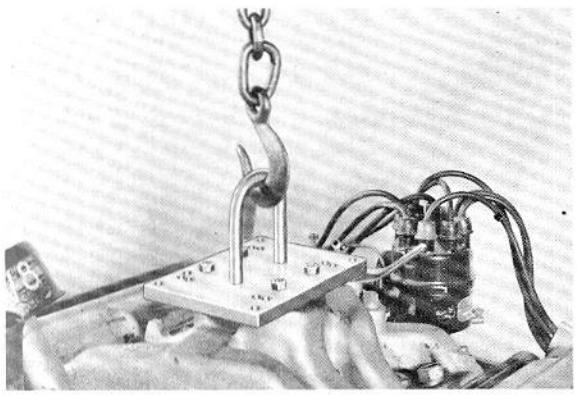
CYLINDER COMPRESSION GAUGE

C-3065 Complete with C-763 Remote Control Starter Switch for all Plymouth, Dodge, DeSoto and Chrysler engines, including V-8's.

The shanks of ordinary compression testing gauges are too short to reach down through the deep spark plug receptacle and enter the combustion chamber of these engines. This gauge has expanding-type rubber adapters that lock securely in the spark plug opening and allow one-man repeat readings for double checking records. A by-pass valve holds pressure in gauge until released. C-763 Switch is included to make it easy for one man to turn engine over without having to run back and forth to car ignition switch. See page 57 for further details on C-763 Switch.

Proper Removal Of Gauge Will Extend Useful Life of Rubber Expansion Bushings.

After release of the expansion lever, tap top of gauge lightly with palm of hand. This loosens the expansion plug and allows the rubber bushing to contract before pulling it out through the sharp spark plug threads. Always keep a spare set of rubber expansion bushings on hand for emergency use.



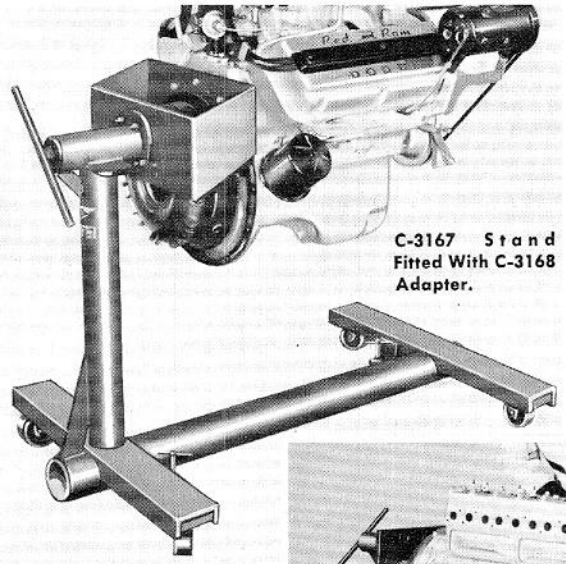
ENGINE LIFTING PLATE

C-3466 For all Plymouth, Dodge, DeSoto and Chrysler V-8 engines equipped with two and four barrel carburetors.

Attempting to lift one of these engines with a rope or chain sling may prove costly—be sure—be safe—use this special plate. Plate fits on carburetor flange and is securely held in place with four carburetor attaching studs and nuts. Provides lift at proper point of balance to facilitate easy removal and installation of complete engine and transmission assembly.

ENGINE REPAIR STAND

C-3167 Stand equipped with flat mounting plate for all Plymouth, Dodge and DeSoto engines **with clutch or converter housing attached.**
(Chrysler V-8 engines should **NOT** be mounted with converter housing attached.)

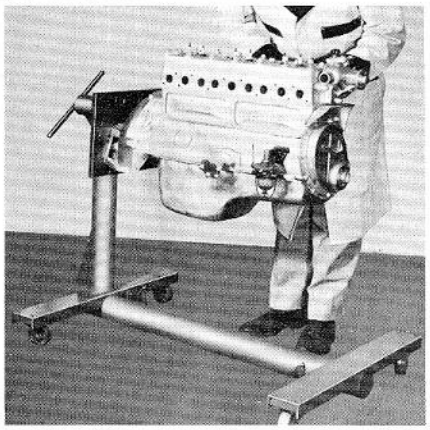


C-3167 Stand Fitted With C-3168 Adapter.

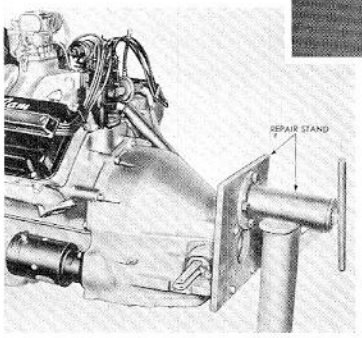
Special Adapters Available Separately.

C-889 Box-type adapter to mount all Plymouth, Dodge, DeSoto and Chrysler in-line engines **with clutch housing removed.**

C-3168 Box-type adapter to mount all Plymouth, Dodge, DeSoto and Chrysler V-8 engines **with clutch or converter housing removed.**



C-3167 Stand With Standard, Flat Plate Adapter.



MOUNTS ENGINES WITH OR WITHOUT CLUTCH OR CONVERTER HOUSINGS.

The box-type adapters provide ample working clearance for leaving Fluid Drive, Clutch or Torque Converter attached while mounting engine with the clutch or converter housing removed.

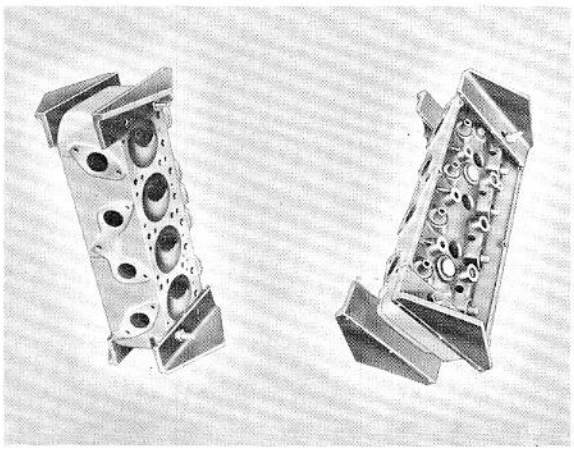
Safely Swings In-line And V-8 Engines Thru Full 360° Turnover.

Here is the safest—most convenient and versatile engine stand you can buy. It balances both in-line and V-8 engines so that they can be easily and safely rotated to most convenient working position. Ideal for both shop and show room use.

Stand Is Strong—Provides Working Base For All Major Engine Service—Including Cylinder Reboring.

Heavy, reinforced, 3" inside diameter, tubular steel and 4" channel construction makes this stand able to absorb rough, every day service. Four ball bearing swivel casters make stand easy to move and two screw-type brake pads will lock it in any desired location. Roll-over bearing is fitted with lubrication fitting to assure smooth, trouble-free turnover of engines up to 1000 pounds.

CYLINDER HEAD HOLDING FIXTURES



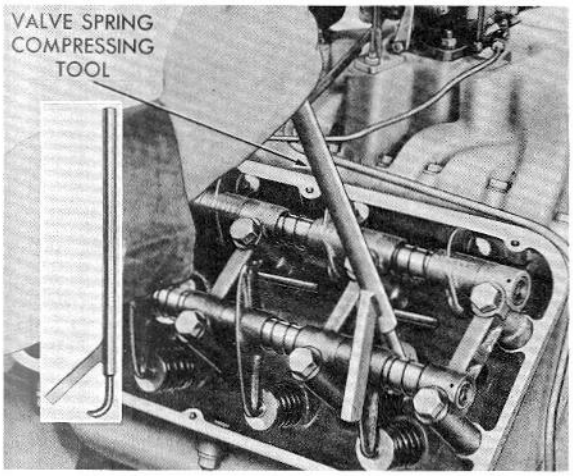
C-3038 Set of 4 **pair** for all Chrysler V-8's.

C-3133 Set of 4 **pair** for all DeSoto V-8's.

C-3209 Set of 4 **pair** for all Plymouth and Dodge V-8's thru 1955 models.

Aluminum Fixtures Protect Machined Face Of Cylinder Heads—Allow Full Working Freedom at Most Convenient Work Angle

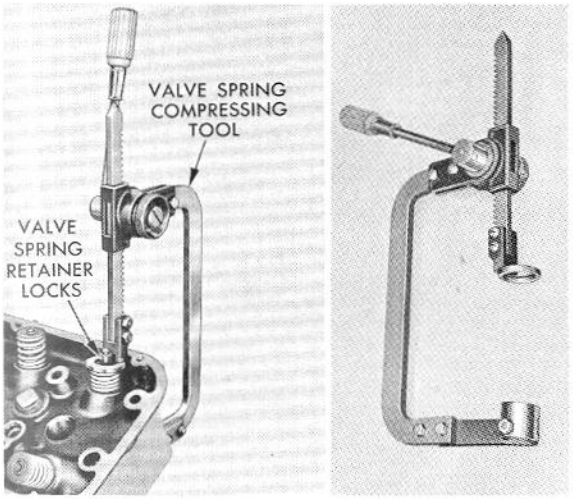
Attempting to remove carbon, replace valve guides and other minor services on these cylinder heads can result in serious, irreparable damage to the cylinder head if the head is not properly protected. You can be sure of being safe by fitting a set of these soft, aluminum protecting fixtures to the cylinder head as soon as it is removed from the engine. A set of 4 pairs allows both cylinder heads to be worked on simultaneously. Built-in angles mount cylinder head correctly to allow right angle operation of valve seat grinders, etc.



VALVE ROCKER ARM AND VALVE SPRING COMPRESSOR

C-3024 For Dodge, DeSoto and Chrysler V-8 engines with double rocker arms and hydraulic tappets.

This simple lever type tool hooks over the valve rocker arm for compressing the valve springs. Saves time and eliminates the effort of removing eight rocker arm assembly hold-down cap screws, when removing push rods for inspection of hydraulic tappet units. Every shop needs several of these important essential tools.



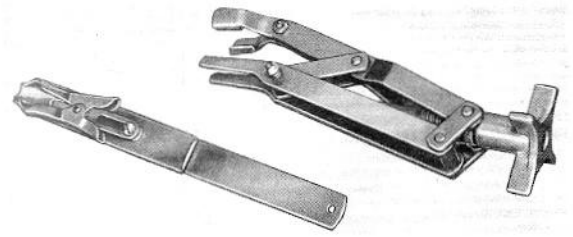
VALVE SPRING COMPRESSOR

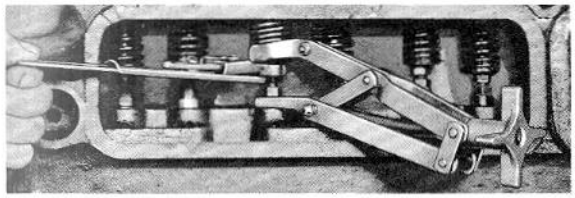
C-3422 Ratchet type for all Plymouth, Dodge, DeSoto and Chrysler V-8 engines.

SP-1182 Special Anvil to convert C-3023 earlier model compressor to service 1955 and 1956 V-8 engines.

Ratchet Head Speeds Up Work And Locates Compression Handle For Maximum Leverage.

Save time by equipping your shop with this properly designed compressor. It completely compresses the valve spring and provides clearance for retainer locks and cylinder head ribs. Some other compressors may look like this one to a casual observer, but actual application will prove this the easiest, fastest and safest to use. Anvil and compressor foot are replaceable.





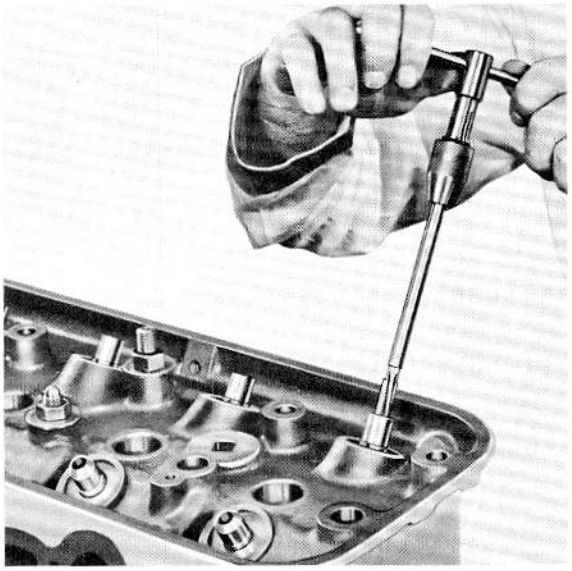
SHORT, STRAIGHT LIFT VALVE LIFTER

C-482 For all six cylinder engines.

VALVE LOCK INSTALLING TOOL

C-486 For all six cylinder engines.

Here is the combination of valve tools that satisfactorily service all engines where limited space makes others useless. The lifting screw of the lifter has a fast acting thread for lifting the valve spring straight up with only a turn or two of the large wheel nut.



OVERSIZE REAMERS FOR SINGLE ROCKER ARM V-8 ENGINES

C-3427 .030" Oversize for 3/8" valve.

C-3430 .015" Oversize for 3/8" valve.

C-3433 .005" Oversize for 3/8" valve.

VALVE GUIDE REAMERS

Accurate reaming of the valve guide to provide proper clearance for the valve often means greater oil economy and improved power output. All popular sizes of valve guide expansion reamers available.

Spiral Flute Expansion

C-249 Size .343"

C-38 Size .375"

C-38-1 Size .370"

DD-413 Size .4375"

Spiral Flute SOLID

C-741 Size .374".

C-742 Size .375".

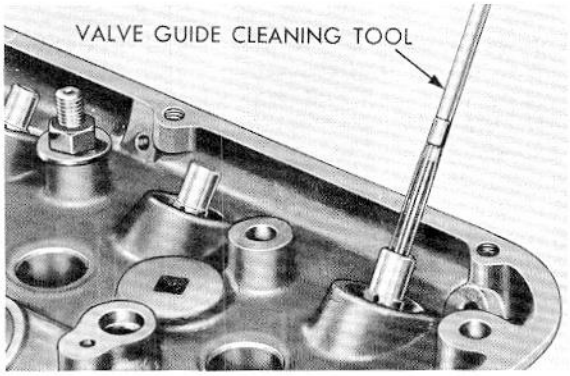
C-743 Size. 437".

C-3103 Size .3425"

C-3104 Size .3440".

Chip Breaker Design Prevents "Loading".

Solid reamers are preferred by most engine repair specialists—they are stronger and turn out precision holes with less effort. Chip breaker design of pilot prevents "loading".



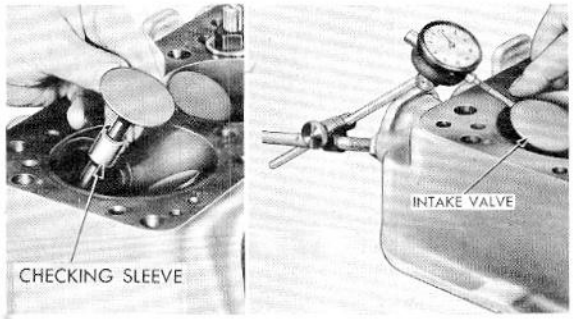
ADJUSTABLE VALVE GUIDE CLEANERS

Fitted with Reversible and Replaceable Blades.

C-756 For 5/16" to 7/16" I.D. Guides

C-766 For 7/16" to 5/8" I.D. Guides

Here is a better valve stem guide cleaner — fast, efficient and inexpensive. Removes all carbon and gum without removing metal. Leaves a fine polished finish. Blades are reversible and can be replaced at low cost.

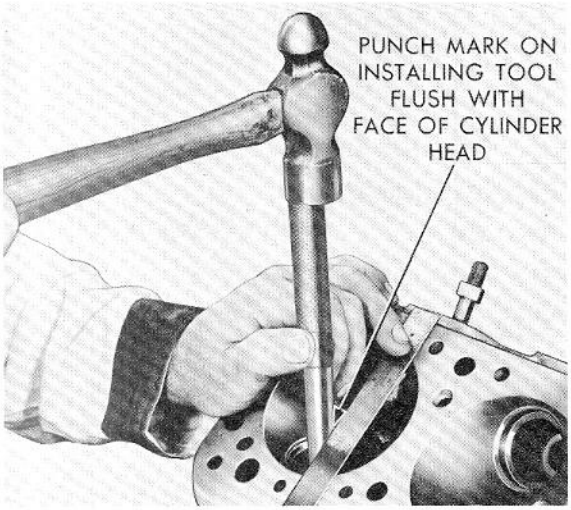


VALVE GUIDE WEAR CHECKING SLEEVES

C-3025 For Plymouth, Dodge, DeSoto and Chrysler V-8 Intake valves.

C-3026 For Plymouth, Dodge, DeSoto and Chrysler V-8 Exhaust valves.

These special sleeves greatly facilitate the accurate diagnosis of valve guide wear. Sleeve raises valve off its seat and locates it in the position where the maximum amount of wear can be indicated when a dial indicator is used as illustrated. Attempting to check valve guide wear without these sleeves may cause an inaccurate diagnosis. The indicator shown is tool C-3339 — see it more fully described on page 13. Consult factory shop manuals for exact checking details and specifications.



SPECIAL VALVE GUIDE REMOVING AND INSTALLING DRIVERS

DD-849 For all 11/32" I. D. guides.

DD-883 For all In-line engines using 3/8" I. D. guides, also Chrysler V-8's with replaceable guides.

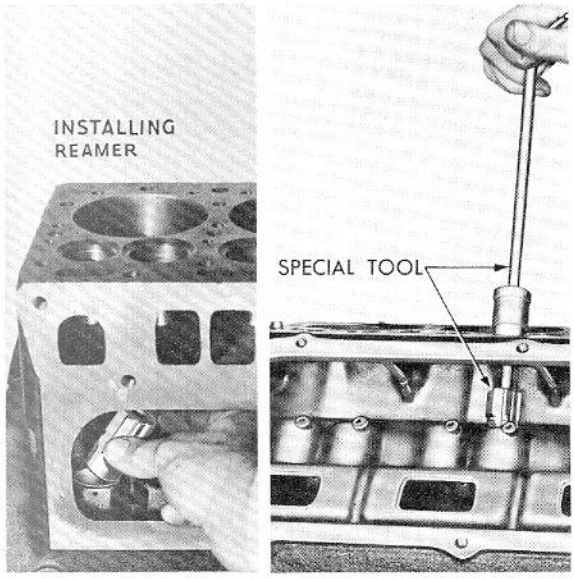
DD-915 For all 7/16" I. D. guides. Services engines fitted with sodium cooled valves.

C-3150 Size 3/8" for DeSoto V-8's.

C-3159 Size 3/8" for Dodge V-8's with replaceable guides.

Calibrated To Properly Locate New Guide In Cylinder Head Or Block.

Each driver has a machined pilot to align itself automatically as the new guide is driven in place. Marks on handle make it easy to properly locate guide to proper depth as shown.



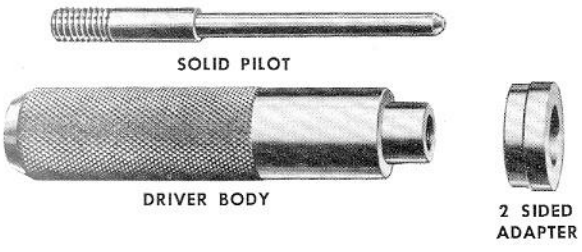
OVERSIZE VALVE TAPPET REAMER SETS

C-265 For all Plymouth, Dodge, DeSoto and Chrysler In-line engines.

C-3028 For all Plymouth, Dodge, DeSoto and Chrysler V-8 engines.

Reamers Pilot In Old Hole With Drive Handle Aligned In Valve Guide.

Elimination of noisy tappets often requires their replacement with .001", .008" or .030" oversize parts. The .001" oversize will usually fit directly into the worn hole, however, installation of .008" and .030" oversize tappets will require accurate reaming and re-aligning of the tappet bore. When installing .030" oversize parts, the .008" reamer must be used first and then the .030" reamer. Drive handle automatically aligns itself in valve guide. A special aligning bushing for push rod bore is supplied for V-8 engines. Reamer may have to be turned over to ream all the way through tappet bore on some engines. In such cases, hole should be reamed as far as possible with pilot diameter down before turning reamer over for completing job.



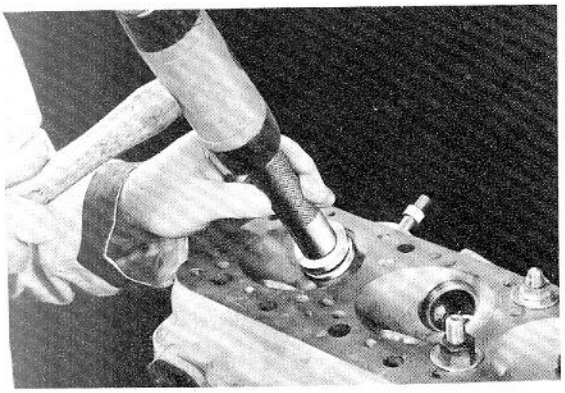
VALVE SEAT INSERT DRIVER SETS

C-767 Junior Set. Range 1-3/8" to 1-31/32". Complete with Driver Body, 6 Heads and 4 Pilots, sizes 7/16", 11/32", 3/8" and Ford 85 Special. Services all Plymouth, Dodge, DeSoto and Chrysler Sixes and V-8's.

C-768 Master Set. Range 1-1/8" to 3-1/8". Complete with Driver Body, 16 Heads and 7 Pilots, sizes 5/16", 11/32", 3/8", 7/16", 1/2", 9/16" and Ford 85 Special.

Piloted Drivers Help Assure Tight Fit Of Replacement Inserts.

The solid pilots screw into the driver body to provide accurate alignment of the driver head by piloting in the valve stem bore. Each driver head is machined on both sides to fit two different diameter inserts.



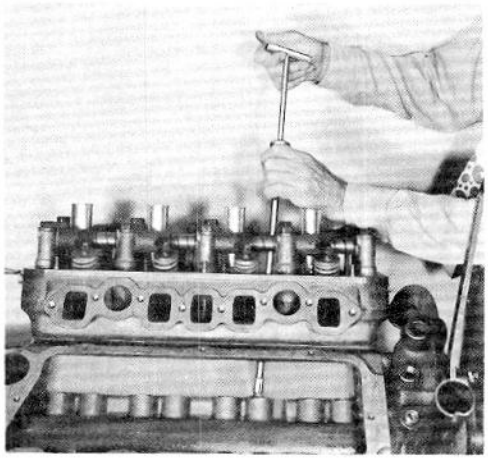
VALVE TAPPET HYDRAULIC UNIT RETRIEVER AND INSTALLER

C-3164 For 1951 and 1952 Chrysler V-8's; also first series 1952 DeSoto V-8's.

Saves Hours Of Time By Reaching Troublesome Units Without Removing Intake Manifold, Valve Covers, Etc.

To retrieve the hydraulic unit from a troublesome tappet, the main body part of the tool is installed using the push rod as a guide. This makes it easy to pilot the split collet end of the tool onto the hydraulic unit. Light pressure expands split collet over the hydraulic unit so that it can be safely and quickly retrieved.

Tool is equally important for installing the hydraulic unit. After the unit is inserted in collet end of tool, the push rod is assembled through the tool and into its normal operating position in the hydraulic unit. Complete assembly is then installed in engine. Short, tee handle portion of tool is then used to press unit out of tool. This leaves the hydraulic unit and push rod aligned and in its operating position. Without tool it is difficult to align and properly install push rod.



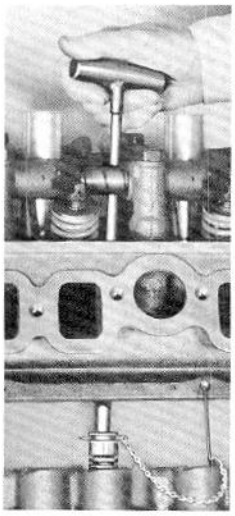
Split Collet Expands Over Hydraulic Unit To Grip It Securely For Safe Removal Thru Push Rod Opening.

VALVE TAPPET PULLER FOR "UNIT" TYPE HYDRAULIC TAPPET

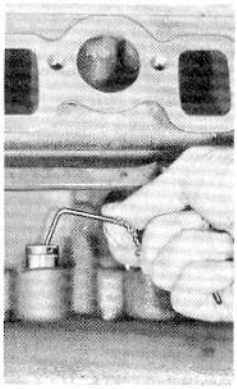
C-3216 For 1953 thru 1956 Plymouth, Dodge, DeSoto and Chrysler V-8's; also second series 1952 DeSoto V-8's.

"Unit Type" Tappet Has Drilled Hole In Upper Section Of Body.

The manifold and valve cover plates must be removed to expose the hydraulic valve tappets. After considerable engine operation, the valve tappets usually accumulate a thin hard film that makes them difficult to remove without a special puller like this. A special "grappling" hook is supplied to lift the tappet as shown. A light chain connects it to a straight pin used to connect the tappet body to the tool. Twisting tool back and forth in a "wringing" motion as tappet is pulled will help cut varnish-like film from tappet.



Straight Pin Connects Tappet Assembly to Tool.



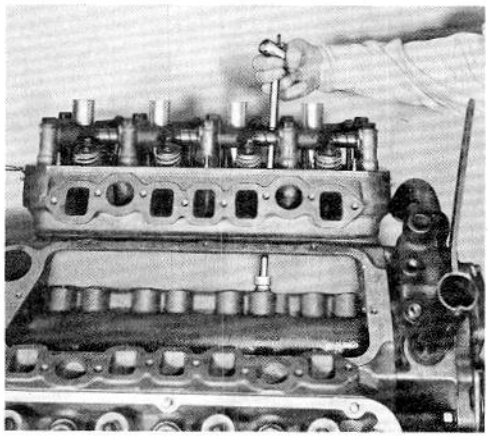
Lifting Tappet With C-3216 "Grappling" Hook

VALVE TAPPET BODY PULLER

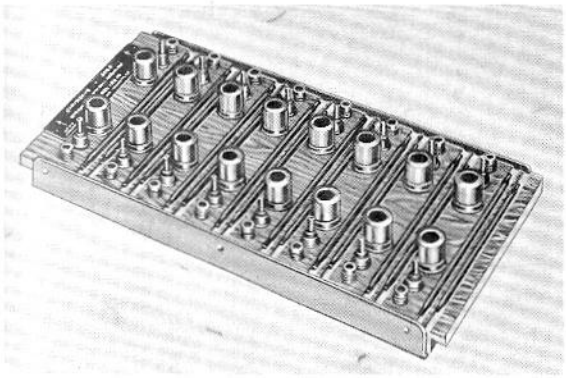
C-3035 For 1951 and 1952 Chrysler V-8's; also first series 1952 DeSoto V-8's.

Expansion Head Of Tool Safely Grips In Body Of Tappet.

The thin varnish-like film that usually coats the lower portion of the tappet body often makes it very difficult to remove. This tool provides a safe method of gripping the tappet body and "wringing" it out of the block, as recommended in the Factory Service Manual.



Head Of Tool Is Expanded Into I.D. Of Valve Tappet Body.

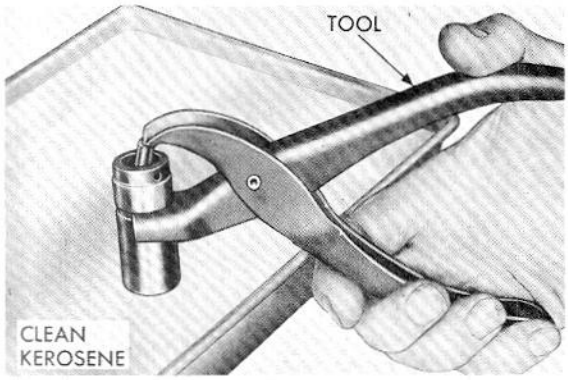


VALVE TAPPET PUSH ROD AND TAPPET HYDRAULIC UNIT CARRIER

C-3068 For all Plymouth, Dodge, DeSoto and Chrysler V-8 engines.

Wooden Rack Protects Lapped And Ground Finishes Of These Vital Parts While Removed From Engine.

There is no chance for interchanging matched sets of tappet parts when you use this special fitted carrier. Forty-eight carefully machined openings and an etched metal identification plate make it easy to keep all parts identified to each assembly and correct cylinder and bank. Made of seasoned hardwood and metal for safe, easy washing of carrier and parts in most any cold automotive cleaning fluid.



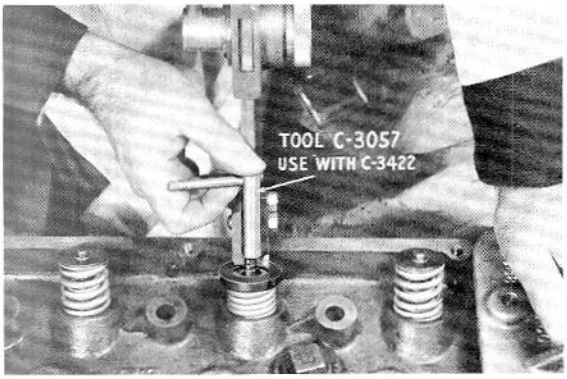
VALVE TAPPET AND UNIT LEAKDOWN CHECKING PLIERS

C-3148 For checking hydraulic unit on 1951 and 1952 Chrysler V-8's and first series 1952 DeSoto V-8's.

C-3160 For checking valve tappet assembly on 1953 thru 1956 Plymouth, Dodge, DeSoto and Chrysler V-8's, also second series 1952 DeSoto V-8's.

Quickly Detects Noisy And Defective Units.

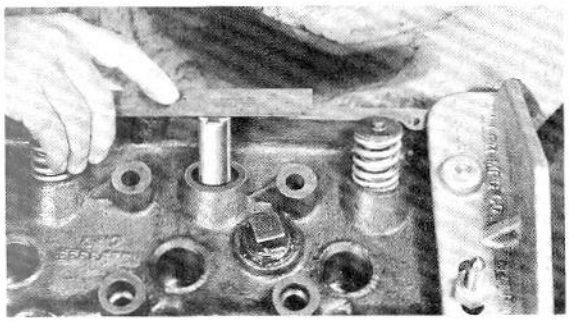
Noisy and defective hydraulic units can be accurately detected by using these pliers to actuate assembly and test the hydraulic pressure that can be developed as shown. Use kerosene and follow testing instructions given in Factory Service Manuals.



INTAKE VALVE OIL SEAL INSTALLING TOOL

C-3057 For All Plymouth, Dodge, DeSoto and Chrysler V-8 engines up to and including 1955 models.

When the intake valve spring is compressed with the C-3422 Compressor, this tool should be used to safely install the delicate oil seal over the valve stem. Tool prevents seal being torn on valve lock grooves of valve stem. Proper installation of seal is important to oil economy.

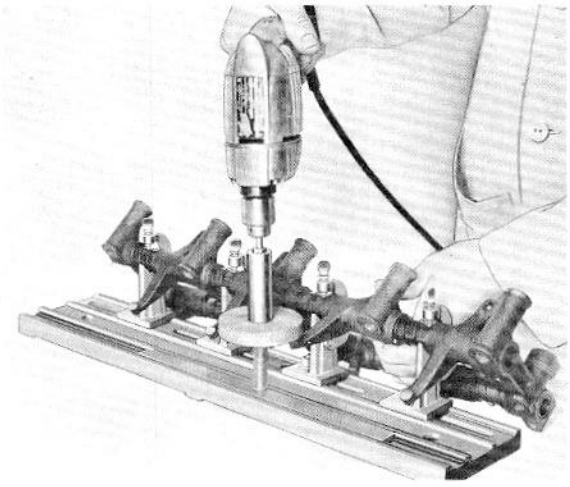


VALVE STEM LENGTH GAUGES

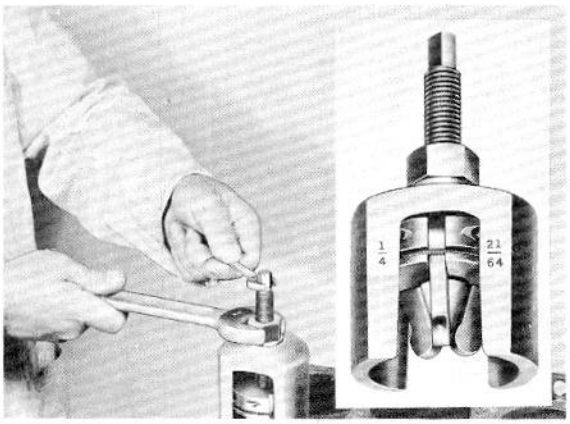
C-3061 For all Dodge, DeSoto and Chrysler **double** rocker arm V-8 engines.

C-3436 For all Plymouth, Dodge and Chrysler **single** rocker arm V-8 engines.

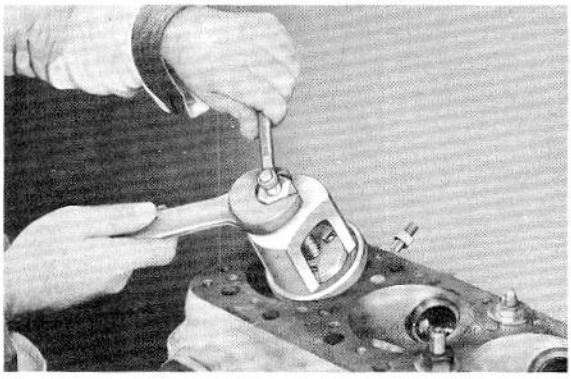
These simple gauges make it possible to quickly and easily check the length of the valve stem as illustrated. Overall dimension of gauge indicates maximum length of valve stem while bottom of slot indicates minimum length. Valve stem must be within these limits to allow valve to fully close and to assure designed hydraulic action of valve tappet linkage.



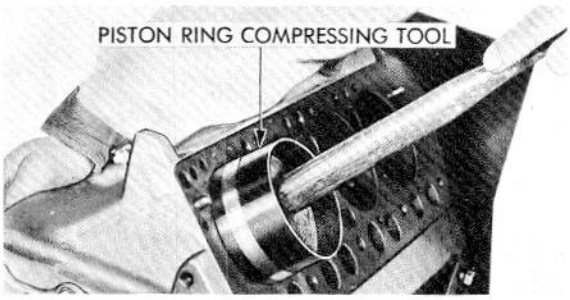
Grinder Slides Back and Forth on Jig to Align with Rocker Arm



C-732 Removing Insert from In-Line Engine



Removing Insert from V-8 Engine

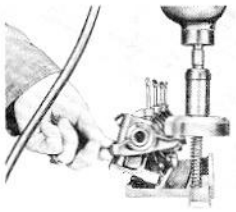


V-8 ROCKER ARM REFACER

C-3263 Fixture complete with grinding stone and holder.

Grinds Rocker Arms WITHOUT Removing Them From Shaft.

When grinding valves on these engines be sure to check the contact surfaces of the rocker arms. If they are worn and rough, this special fixture will help you save time regrinding them to original factory specifications.
Rocker arm shaft assembly easily clamps in the four "V" brackets which are held in parallel alignment to the grinding stone pilot. The stone pilot is mounted in a sliding bracket which is moved along the fixture to meet the rocker arm. Lower Photo shows how rocker arm is brought into contact with the grinding stone, which is driven with any standard electric drill. Raise and lower stone slightly while slightly rocking arm to produce accurately ground radius on rocker arm. Services practically all 4, 6, and 8 cylinder engine rocker arms.



Grinds Radius On Rocker Arms.

Rock rocker arm slightly, as illustrated at left, while raising and lowering grinder and stone to grind radius on rocker arm.

VALVE SEAT INSERT PULLERS

C-732 For all Plymouth, Dodge, DeSoto and Chrysler In-Line engines. Ranges 1-5/16" to 1¾" I.D. inserts.

C-3140 C-732 complete with SP-1454 Adapter. For all Chrysler and DeSoto V-8 engines equipped with inserts.

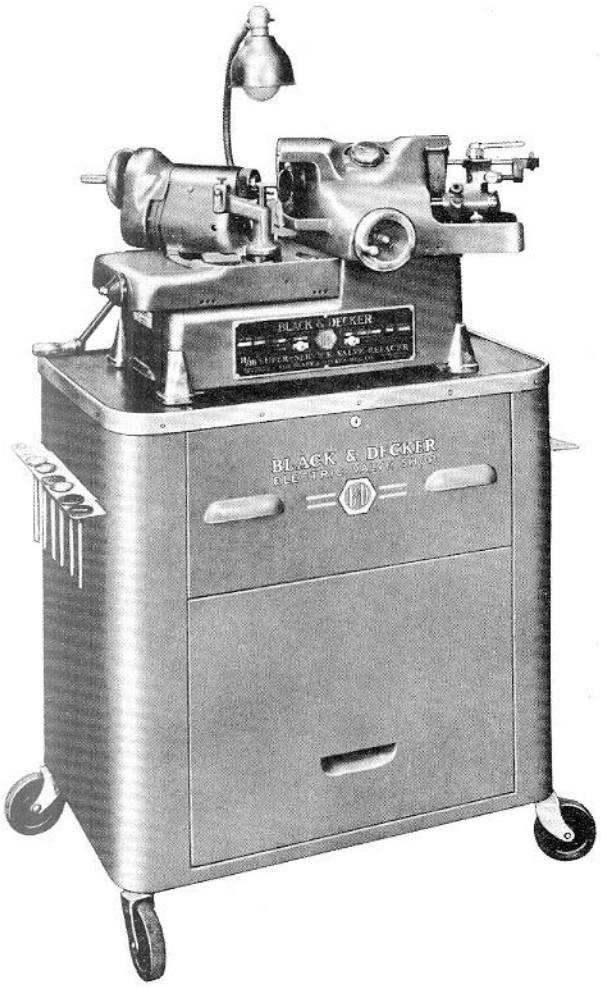
C-3249 C-732 complete with SP-1737 Adapter. For all Dodge V-8's with double rocker arm engines equipped with inserts.

Cracked or worn hardened valve inserts can be easily removed with these expanding type pullers without any danger of damaging the valve port or cylinder block. The pulling points of the three hardened jaws are first expanded into the soft iron directly below the hardened insert which is then quickly removed by tightening the puller screw nut as illustrated. Jaws are replaceable.

UNIVERSAL PISTON RING COMPRESSOR

C-385 For All cars — Range 2½" to 5" Dia.

Every efficient engine repair and overhaul department needs several of these low-cost, wrap-around ring compressors. Their use avoids unnecessary piston ring breakage as the piston assembly is entered into the block. Multiple piece rings are easily installed without distortion or breakage with this tool. Be sure rings are fully entered in piston ring groove before completely tightening compressor.



VALVE SERVICE SHOP

Complete Equipment For Merchandising Precision Valve Reconditioning Service.

No. 552 Valve Shop includes valve refacer, valve seat grinder and work cabinet as shown. See specifications below for details.

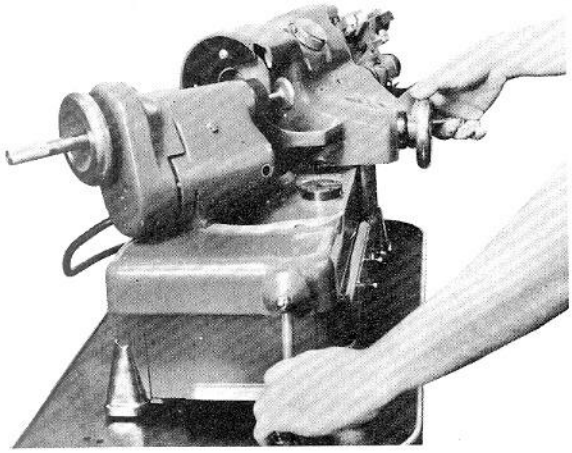
The #550 Super-Service Valve Refacer produces an absolutely smooth surface and true angle on valve faces. The Vibro-Centric Seat Grinder restores perfect accuracy and mirror finish to all types of valve seats, hard or soft.

The cabinet's bench-top holds the Refacer at best working height. The large fitted drawer has trays for all seating stones, stone sleeves, self-centering pilots, carbon removing brushes and Refacer attachments with ample room for additional stones and pilots. The full size lower cabinet has storage space for the Vibro-Centric Driver, drills, gaskets, tools and other parts. Two removable valve trays on each side of the cabinet help to keep valves in correct order. The Valve Shop is equipped with an adjustable lamp; four electric outlets to plug in Refacer, Vibro-Driver, drill and hand lamp; extra long extension cord with third wire for grounding; and four large rubber-tired casters, which roll easily over rough floors.

SPECIFICATIONS

- 1 Valve Shop Cabinet
- 1 No. 550 Deluxe Super-Service Refacer (Wet-Grinding)
- 1 Leatherette Refacer Cover
- 1 Heavy-Duty 55° Driving Unit
- 3 Valve Guide Cleaners: 21441 (5/16"); 21445 (3/8"); 21449 (7/16").
- 2 Carbon Cleaning Brushes: 21416 (H-D); 21417 (Side Flare)
- 1 Standard Stone Dressing Stand —No. 20153
- 2 Standard Stone Sleeve — No. 22100
- 7 Self-Centering Pilots
- 3 Hard-Seat Stones
- 9 Soft-Seat Stones

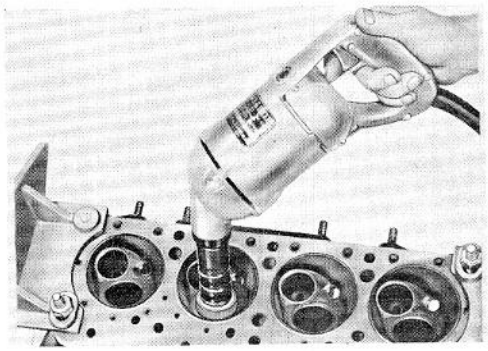
Standard Voltages—115 or 220.



VALVE REFACER IS EQUIPPED WITH MICROMETER VALVE STEM AND ROCKER ARM GRINDING ATTACHMENTS

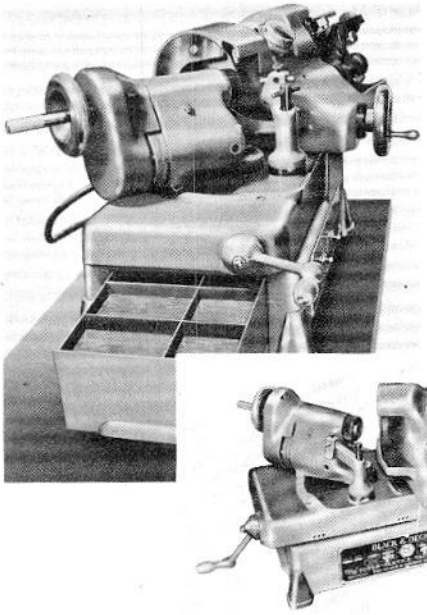
This set of new attachments is extremely accurate and also quick and efficient in operation. (See next page for details.) It assembles to the outside end of the wheel-head spindle and permits:

(1) grinding valve stems to obtain exact tappet clearance, on Ford type valves,
(2) squares all other valve stems,
(3) grinds and trues tappets,
(4) grinds and restores the correct radius to all automotive rocker arms.



55° ANGLE DRIVE VALVE SEAT GRINDER INCLUDED

This popular Vibro-Centric grinder re-grinds both hard and soft seats to a mirror finish; gets close up to the firewall without interference. All grinding is concentric with no complicated adjustments or special installation skill required. Self-centering pilots service In-line and V-8 engines and assure correct alignment with minimum effort. See page 72 for details.



TWIN-POWERED WET TYPE VALVE REFACER

Essential Equipment For Any Car Dealer Or Automotive Service Shop

This Deluxe, precision-built machine offers new ACCURACY, SPEED AND OPERATING SMOOTHNESS. Two "Universal" motors independently drive the collet and wheel spindles for abundant, smooth power. This helps assure a valve face free of chatter marks. Coolant pump is mounted on the wheel-head, with one valve directing coolant to either wheel.

550 REFACER COMPLETE WITH ATTACHMENTS

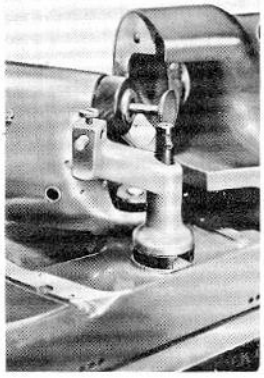
Valve Stem capacity 9/32" to 11/16". Equipped with 2 Collets, (1) 9/32" to 9/16"; (2) ½" to 11/16". Capacity can be extended to include ¼" stems by adding No. 36552 Collet. Includes wheel dresser and special attachments described below.

Valve Head Capacity . . . up to 4" dia. Angle Adjustment . . . 0° to 90° Standard Voltage—115 or 220. On special order 125 or 240 volts. Shops not requiring extra attachments should order Model 282.

282 REFACER LESS ATTACHMENTS

Specifications same as for No. 550 Deluxe Refacer except for elimination of Valve Stem, Tappet and Rocker Arm Grinding equipment.

Mounting Dresser



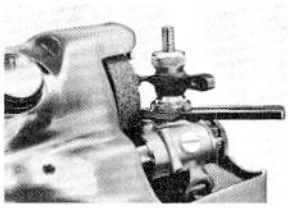
Dresser Pivots Out of Way.

WHEEL DRESSER MOUNTS ON REFACER—PIVOTS OUT OF WAY WHEN GRINDING VALVES

The wheel dressing attachment need not be removed from work table when refacing valves.

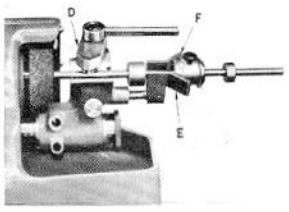
The illustration at the left shows how this attachment pivots out of the way of the workhead and valve to be ground.

MODEL 550 REFACER INCLUDES THESE EASY-TO-USE ATTACHMENTS FOR PRECISION GRINDING ROCKER ARMS, TAPPETS AND VALVE STEMS TO LENGTH



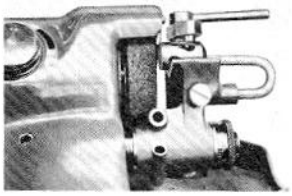
For Grinding Rocker Arms

A double cone clamp, adjustable to the bore of the rocker arm to be ground, mounted on an adjustable arm which handles all automotive rocker arms. Less than one turn of the cone firmly clamps the rocker arm.



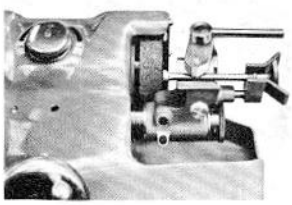
Depth Gauge Measures Amount To Be Ground From Ford Valve Stems

An "universal" depth gauge with correct sizes of valve head and port bushings fits all Ford V-8, six- and four-cylinder engines.



For Grinding Valve Tappets

An "universal" V-block and QUICK-CLAMP, with adjustable V-stop. The QUICK-CLAMP holds tappets for grinding and truing, and holds the diamond point for dressing the wheel. An U-shaped adjustable stop permits grinding all tappets to the same length.



For Grinding Valve Stems To Length

An "universal" V-block and QUICK-CLAMP, with adjustable V-stop, adapted to varying head sizes and stem lengths.

HEAVY-DUTY VALVE SEAT GRINDER

No. 597 Complete with stone dresser and hardwood cabinet. For all popular engines.

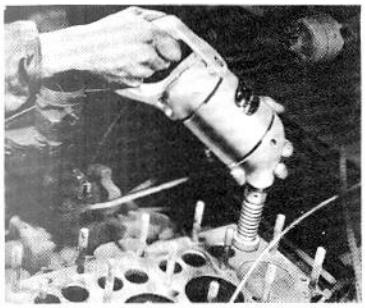
SPECIFICATIONS

1 No. 331 Heavy-Duty 55° Driver
1 No. 20153 Standard Stone Dressing Stand
2 No. 22100 Standard Stone Sleeves
1 No. 36415 Universal Kit Box
7 "Gruv-Top" Self Center Pilots: **14425** (5/16"); **14426** (11/32"); **14427** (3/8"); **14155** (Ford V-8); **18608** (5/16"); **25204** (5/16" for counter-bored guide); **23633** (11/32" for counter bored guide)
3 Hard Seat Stones: **14056** (1-½" — 45°); **14100** (1-⅝" — 45°); **14049** (1-¾" — 45°)
9 Soft Seat Stones: **18541** (1-⅜" — 45°); **14084** (1-½" — 45°); **14063** (1-⅝" — 45°); **14085** (1-¾" — 45°); **14086** (1-⅞" — 45°); **14064** (2" — 45°); **14199** (1-⅝" — 30°); **14090** (1-¾" — 30°); **14268** (1-⅞" — 30°).

Standard Voltage 110 or 220.

Grinds Both Hardened Exhaust Seat Inserts And Soft Intake Valve Seats.

Every shop needs a dependable grinder to efficiently reseat valves on not only new cars but on all popular makes of used cars that may be traded or sold. This grinder set will help your shop build a reputation for dependable, efficient engine reconditioning and will make a handsome profit for you simultaneously.



55° ANGLE DRIVE HEAD REACHES VALVES CLOSE TO FIREWALL WHERE CLEARANCE IS LIMITED

The most popular driver in use today. Has ample power for maintaining correct grinding speed with the new longer, heavier grinding stones. 55° Angle driver allows ample working clearance where firewall overhangs engine.

No. 331 DRIVER SPECIFICATIONS. Spindles Speed 12,000 R.P.M. Overall length 11½".

Stone Dresser Is Included With Each Grinder—Dresses Stones Up To 3½" Dia. And From 0° to 90°

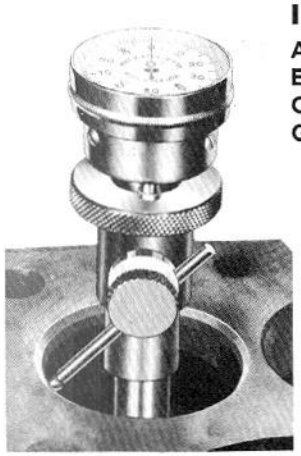
A sturdy die-cast Dressing Stand, with an accurate angle indicator which is easy to set—insures accurate stone dressing. A horizontal adjustment of the arm accommodates various stone sizes and permits horizontal or vertical cutting.

No. 20153 Stone Dresser Specifications (Type B)

Stone Size Capacity ..... up to 3½"
Mandrel Diameter ..... ⅜"
Angle Adjustment ..... 0° to 90°
Weight: Net ..... 10¼ lb.

Replacement Parts For 20153 Dresser Stand

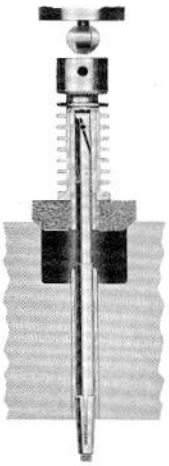
No. 20157 Diamond Nib
No. 20148 Standard Mandrel
No. 31115 Special Mandrel to take extra long stones such as Nos. 27116, 27117, 27118, 27141, 27142



VALVE SEAT INDICATOR NO. 13725

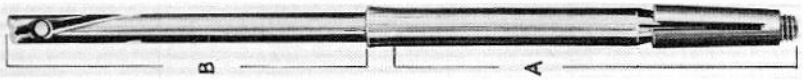
Available As Recommended Extra To Test Condition Of Seats Before And After Grinding

Calibrated to 1/1000 of an inch. When the indicator is placed on the pilot, the top section is held firmly on the pilot while the lower section is rotated with adjustable arm, in contact with the valve seat. Plus or minus variations in the seat are read on the dial during rotation.



"VIBRO-CENTRIC" METHOD OF VALVE SEAT GRINDING

In all Vibro-Centric Drivers, the driving spindle incorporates a positive vibrating action, which lifts the grinding stone from the seat once each revolution. This prevents loading the stone, speeds up grinding and reduces stone wear. All grinding is concentric, cutting the entire circumference of the seat and insuring correct alignment. No complicated adjustment is required.

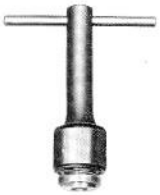


MAKE	PILOT SIZE	CATALOG No.	DIMENSIONS A	DIMENSIONS B	SLEEVE No.
CHRYSLER, DE SOTO	11/32"	14426	1 17/32	3 1/4	13904
DODGE and PLYMOUTH	11/32"	23633	1 3/16	2 3/4	13904
PASSENGER CARS	3/8"	14427	1 17/32	3 3/16	13903
DODGE TRUCK	11/32"	16199	1 1/32	3 1/4	13904
	11/32"	21302	1 17/32	2 11/16	13904
	11/32"	24310	1 3/4	2 15/16	13904
	7/16"	25221	1 1/2	3 27/32	13901
	3/8"	20667	2 1/32	2 31/32	13903
	7/16"	22989	2 1/4	3 31/32	13901
	7/16"	25219	2 1/4	4	13901

Other Sizes Available for Cars and Trucks of All Makes.

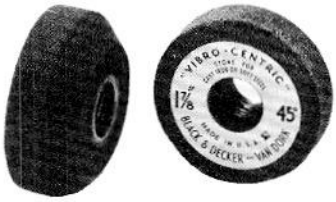
EXPANDING SLEEVE SELF-CENTERING PILOTS

"GRUV-TOP" Self-Centering Pilots provide an accurate, rigid axis for grinding with "Vibro-Centric" Stones. Two machined tapers—at the top of the shank, to fit the top of the valve guide, and at the bottom, to expand a split sleeve in the lower end of the guide. The expanding feature compensates for worn guides and eliminates a large stock of oversize pilots. Self-Centering Pilots expand .020" to .030". The patented "GRUV-TOP" feature locks the retainer ball in No. 27200 Ball-Bearing Stone Sleeve, holding the inner sleeve stationary and preventing friction and wear between sleeve and pilot stem.



PILOT TURNING WRENCH

19829 To prevent injury to user's hands while inserting or removing Self-Centering or other Pilots.



VALVE SEAT GRINDING STONES

"VIBRO-CENTRIC" Valve Seat Grinding Stones are carefully formed and accurately dressed. They are made in 3 grades to do the fastest and most satisfactory work on all types of seats. WHITE LABEL—for Soft Seats, RED LABEL—for Hard Seats, GREEN LABEL—for finishing.

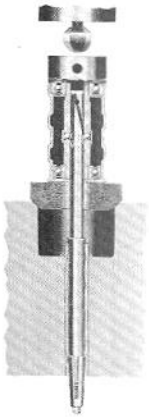
Stones under 2½" are vitrified. 2½" in diameter and over are resinoid bonded.

AUTOMOTIVE STONE SLEEVES

Automotive Seat-Grinding Stones have threaded bushings and are interchangeable on any of the following Automotive Sleeves which fit Self-Centering Pilots. Upper end of the Sleeve is a hexagon Socket which forms a universal joint with the driver spindle.

22100 STANDARD AUTOMOTIVE STONE SLEEVE—Long bronze bushing accurately reamed to fit pilot.

23652 SHORT STANDARD AUTOMOTIVE STONE SLEEVE—For increased clearance on hard-to-reach seats. Overall length 2¾". Use with Stand 20153 with 20148 mandrel; or 31672 H.D. Stand.



BALL BEARING AUTOMOTIVE STONE SLEEVES

27200 WITH retainer ball for "GRUV-TOP" Pilots. Designed to minimize wear, to preserve accuracy and give longer service. Ball-bearings are between inner and outer sleeve.

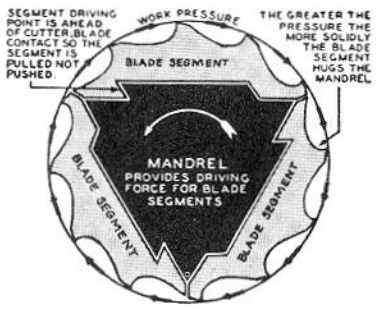
19825 Ball-Bearing Stone Sleeve WITHOUT retainer ball.

Size	FOR SOFT STEEL AND CAST IRON 45° Stone	30° Stone	20° Stone	FOR HARD STEEL AND STELLITE 45° Stone	30° Stone	20° Stone	Size	FOR FINISH-GRINDING 45° Stone	30° Stone
1¼"	14216	14197	25676	14217	14218	.....	1¼"	14414	14413
1⅜"	18541	25671	23666	18540	25670	23667	1⅜"	18542	25672
1½"	14084	14198	14092	14056	14219	14107	1½"	14382	14370
1⅝"	14063	14199	14093	14100	14287	14108	1⅝"	14383	14371
1¾"	14085	14090	14094	14049	14105	14109	1¾"	14384	14372
1 13/16"	23957	.....	.....	.....	.....	.....	1 13/16"	.....	.....
1⅞"	14086	14268	14095	14101	14288	14110	1⅞"	14385	14373
2"	14064	14091	14096	14102	14106	14111	2"	14386	14374
2⅛"	14087	14278	14097	14103	14289	14112	2⅛"	14387	14375
2¼"	14088	14279	14098	14104	14290	14113	2¼"	14388	14376
2⅜"	16929	25635	23668	16951	.....	23669	2⅜"	23670	25636
2½"	14089	14280	14099	14050	14291	14114	2½"	14389	14377
2⅝"	14285	14281	14274	14239	14292	14270	2⅝"	14390	14378
2¾"	14153	14282	14275	14200	14293	14271	2¾"	14391	14379
2⅞"	14286	14283	14276	14295	14269	14272	2⅞"	14392	14380
3"	14154	14284	14277	14243	14294	14273	3"	14393	14381
3½"	21474	26527	.....	21473	.....	.....	3½"	21475	.....

Specifications of larger diameter stones can be secured on application.

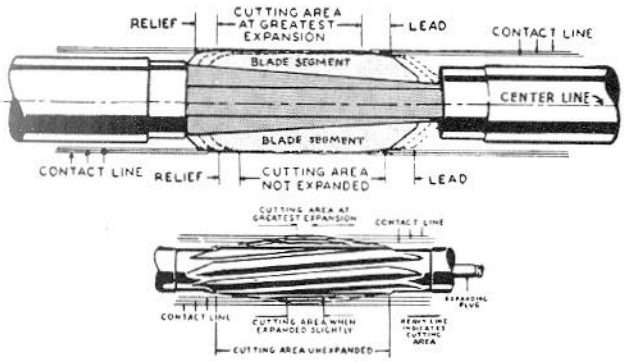
For FITTING PISTON PIN AND KING PIN BUSHINGS

DUAL SPIRAL, ADJUSTABLE, REPLACEABLE, HIGH SPEED STEEL BLADE—REAMERS


SEGMENT DRIVING POINT IS AHEAD OF CUTTER BLADE CONTACT SO THE SEGMENT IS PULLED NOT PUSHED
WORK PRESSURE
THE GREATER THE PRESSURE THE MORE SOLIDLY THE BLADE SEGMENT HUGS THE MANDREL
BLADE SEGMENT
MANDREL PROVIDES DRIVING FORCE FOR BLADE SEGMENTS
BLADE SEGMENT
BLADE SEGMENT

NOTE THAT THE MANDREL DRIVES THE BLADES

Note how cutting contact is maintained at any expansion



Note how ordinary expansion reamer (sketched above) has constantly shortened contact as reamer is expanded.

Cuts And Burnishes In Single Operation

Cross Section of reamer at left shows exclusive dual spiral design which sweeps cutting surface free of metal chips. This eliminates scratching and gouging and produces a full, smooth bearing surface quickly and easily.

Right and left hand spiral flutes provide fast, easy reaming even in solid or split bushings, with keyways and oil grooves.

Blades are made of hard chrome steel that provide long efficient blade life. Extra life can be obtained as they can be resharpened three to five times at $2.00 to $5.00 per sharpening.

Provides Constant Cutting Contact Over Entire Length of Blade—AT ANY EXPANSION

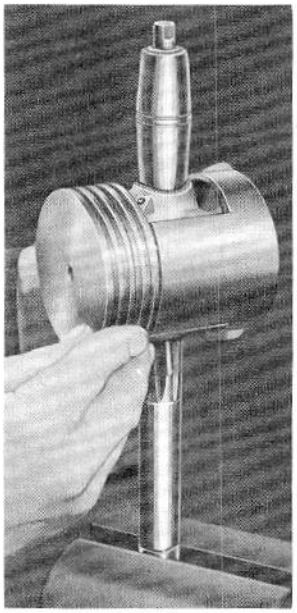
You'll turn out perfect work faster with these reamers! Check sketch at left and see how reamer blades have full cutting contact in any size hole. This distributes wear over entire blade providing longer reamer life. Blade cannot flex and spring away from work—the greater the pressure, the tighter the blade segment hugs the reamer mandrel.

Conventional Expansion Reamers Dull Faster—Cut Slower

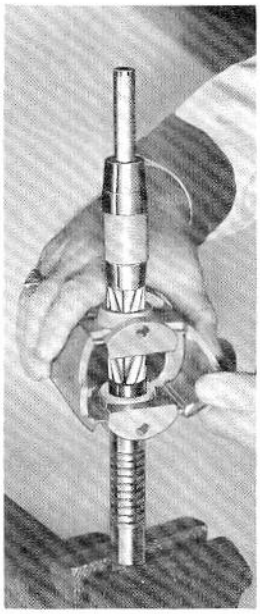
Sketch at left shows how ordinary expansion reamers have a constantly reducing cutting surface as the reamer is expanded. This concentrates the entire cutting load and consequently, the wear on a very small portion of the reamer blade. This means short life and difficulty in holding dimensions on difficult jobs.

REAMER APPLICATION CHART

MAKE OF CAR	YEAR	MODEL	REAMER NO.	REAMER RANGE
PISTON PINS				
Plymouth, Dodge, DeSoto, Chrysler	1931 thru 1955	All In-line engines also all Plymouth and Dodge V-8's	C-3200	.850" to .900"
Plymouth	1956	All V-8's	C-3049	.980" to 1.030"
DeSoto (also '56 Dodge V-8)	All	All V-8's	C-3149	.910" to .960"
Chrysler	All	All V-8's	C-3049	.980" to 1.030"
Dodge Trucks	All	3 and 4 Ton	C-3049	.980" to 1.030"
KING PIN				
Plymouth, Dodge, DeSoto, Chrysler (Incl. ½, ¾ and 1 Ton Trucks)	1935 thru 1956	All, All, All, Windsor — Except 7 Pass. And Station Wagons	79 RL	.790" to .840"
Chrysler	1953 thru 1956	New Yorker		
Plymouth, Dodge, DeSoto, Chrysler	1935 thru 1956	All 7 Pass. Models	91 RL	.910" to .960"
Dodge Trucks	1941 thru 1956	¾ and 1 Ton		
Chrysler	1935 thru 1952	New Yorker		
Imperial	1935 thru 1956	Custom and Crown		
Dodge Trucks	1940 thru 1956	1½, 2 and 2½ Ton	109 RL	1.090" to 1.145"
Dodge Trucks	1946 thru 1956	2¾, 3 and 4 Ton	118 RL	1.185" to 1.240"



DD-82-2 Standard Expansion Reamer Is Low-Cost, Efficient Type. Other Sizes Also Available.



Spiral Flute Adjustable Reamer With Replaceable, High Speed Blades. See Opposite Page For Additional Sizes And Details.

PISTON PIN LINE REAMERS

STANDARD EXPANSION TYPE

DD-82-2 Standard expansion type with spiral flutes and floating pilot, size .859".
For all Plymouth, Dodge, DeSoto and Chrysler In-line engines, also all Dodge V-8's, and all Plymouth V-8's thru 1955.

This type of reamer uses a screw-in type tapered plug to expand the cutting flutes so one size reamer will dependably size holes from .003" under its specified range to approximately .015" over this size. It will produce a maximum of service for a minimum investment. Other sizes available—specify size and type of service to be used.

ADJUSTABLE BLADE TYPE

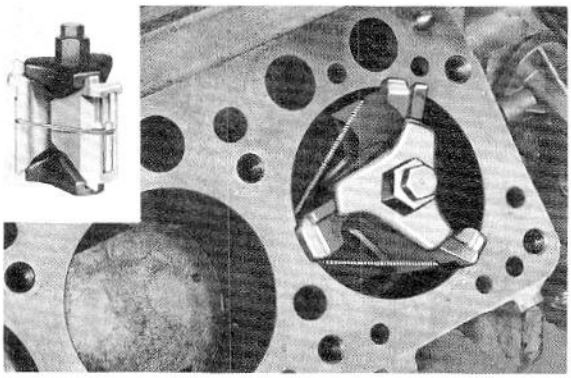
C-3200 Special, adjustable blade type—for all Plymouth, Dodge, DeSoto and Chrysler In-line engines, also all Dodge V-8's, and all Plymouth V-8's thru 1955. Range .850" to .900".

C-3149 Special, adjustable blade type—for all DeSoto V-8's. Range .910" to .960".

C-3049 Special, adjustable blade type—for 1956 Plymouth V-8's, also all Chrysler V-8's, and Dodge 3 and 4 ton truck engines. Range .980" to 1.030".

Piston fitting specialists especially like these reamers for the blades are expanded over their full length providing longer bearings in the holes being reamed. The dual spiral flutes provide a simultaneous cutting and burnishing effect. The blades are made of high-speed steel providing long life between sharpenings. They can also be replaced as a set to give the reamers extra long life.

Both types of reamers are fitted with floating pilots that automatically align the reamers regardless of oversize being reamed. Reamers save time for shops equipped with powered honing machines by roughing out the excess stock and reducing honing time to minimum.



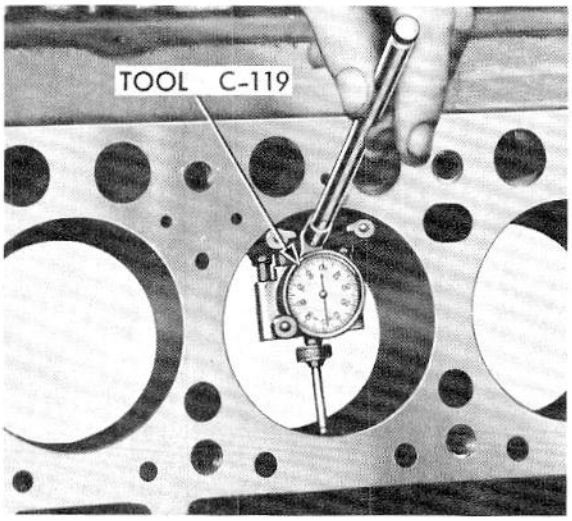
CYLINDER RIDGE REAMER

C-3012 Range 2 9/16" to 4¾" diameter with special short blade for all Plymouth, Dodge, DeSoto and Chrysler engines.

New Design Has Fixed Position Expansion Screw—Will Not Project Thru Reamer And Strike Piston.

This is a new, simplified reamer equipped with self-centering jaws that can be used safely and accurately by even a novice mechanic.

It is fitted with a special short carbide cutter especially designed to avoid bellmouthing the cylinder bore which might expose the top piston ring to full heat of combustion. Allows ridge removal progress to be inspected without removing reamer from bore. Cuts both iron blocks and steel sleeves.



CYLINDER BORE TEST INDICATOR

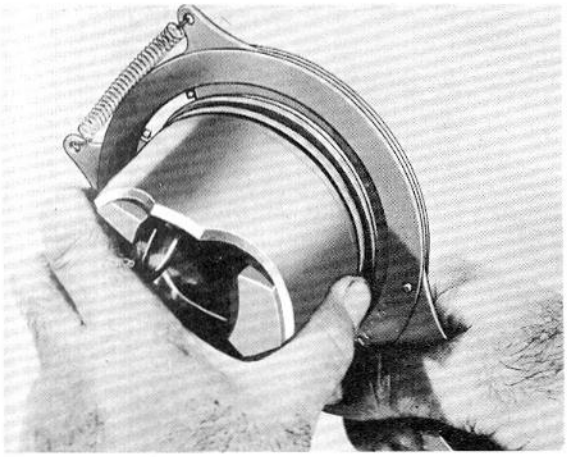
C-119 Range 2½" to 6" diameter.

Has Direct Reading Contact Points Easily Checked With Standard Micrometers.

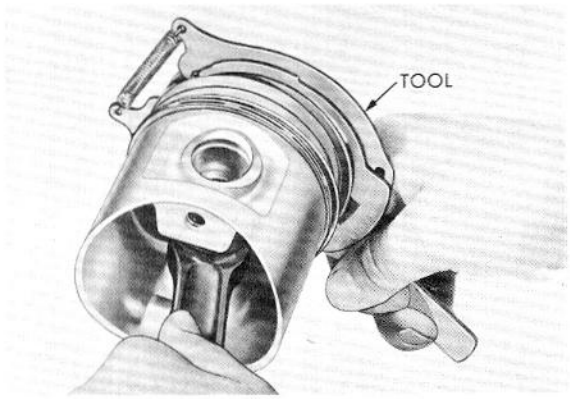
Use this indicator to inspect and check an engine block before and after honing or reboring. The easily read dial indicator shows at a glance the exact taper and roundness of the bore.

The hardened steel sled acts only to hold the gauge square in the bore. Two hardened contact points located directly opposite each other actually measure the bore. Indicator may be locked to size before being removed from the bore.

No master rings or spacer gauges are needed with this indicator. The exact size can be measured and checked with any standard micrometer across the two contact points of the indicator.



Accurate Bore Of Each Tool Safely Limits Maximum Ring Expansion.



Tools Are Equally Important For Removing Rings From Pistons.

PISTON RING INSTALLING AND REMOVING TOOLS

AVAILABLE IN THE FOLLOWING SIZES:

C-518	2-11/16"	C-467	3-3/16"	C-263	3⅝"
C-519	2¾"	C-260	3¼"	C-3418	3.720"
C-264	2⅞"	C-468	3-5/16"	C-3046	3-13/16"
C-520	2-15/16"	C-261	3⅜"	DD-872	3¾"
C-266	3"	C-469	3-7/16"	C-521	3⅞"
C-466	3-1/16"	C-262	3½"	C-3495	3-15/16"
C-259	3⅛"	C-3417	3-9/16"		

Over Expansion Of New Piston Rings Can Make Them Less Effective Than The Old Worn Out Rings They Replace.

New piston rings that have been distorted by over expansion while being installed on the piston have been proven by dynamometer tests to be less efficient than the old worn rings that are being replaced. Tools like these are designed to prevent over expanding the ring, yet allowing ample expansion for fast, easy removal or installation.

The upper left-hand picture shows how the left thumb is used to hold the jointed side of the ring snug in the expansion points of the tool. Once ring is expanded tight into counterbore of tool, it can be easily held in position, installed over piston, and released into proper piston ring groove.

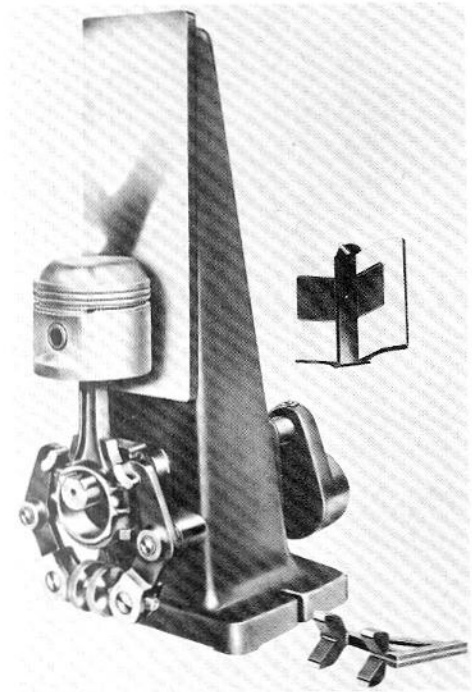
When removing rings, the ring is held tight in the piston ring groove so as to push the ring joint clear and make it easy to engage the expansion points of the tool. A clearance slot on the underface of the tool provides clearance for the finger holding the ring in the ring groove until the ring is expanded and safely held in tool for easy removal.

Actual ring breakage is prevented through the use of these tools even on special, thin, sectional oil rings.

Equip your shop with a full set of these tools to accommodate all of the various sizes of rings regularly serviced.

CONNECTING ROD ALIGNER

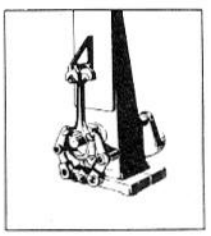
C-3491 Complete with pin and piston checking V blocks. For all automotive engines.



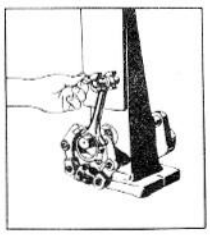
Counterweight Holds Rod In Vertical Position.

Here is a new, faster aligner that accommodates all different sizes of automotive connecting rods. Unique clamping jaws are adjustable, with knurled knob. Weight on reverse side automatically keeps rod vertical even when checking rod without bearing cap. Separate V blocks check rods from piston pin or with piston assembled. Twisted rod can be held in a bench vise and straightened with a heavy monkey wrench. Bent rods can be easily corrected in an arbor press.

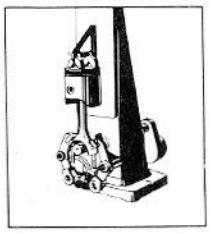
Checks Rod For Bend Or Twist By Mounting Rod Only Or With Piston Assembled— Bearing Cap Need Not Be In Place.



Checks Rod For Bend.

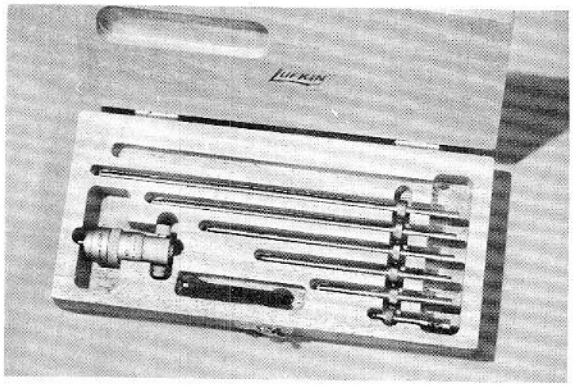


Checks Rod For Twist.



Checks Rod And Piston For Bend.

Checks Rod And Piston For Twist.



INSIDE MICROMETER SET

80 SERIES—Select According To Range. A Necessity For Accurately Checking Cylinder Bores.

An accurate set of calipers ideally suited for automotive work. Takes internal measurements of cylinders or rings, measures internal parallel surfaces, also used for setting and checking calipers or other comparing gauges.

No.	Range Inches	No. Rods	Size Collar Inches
80A	2—8	6	½
80B	2—12	10	½

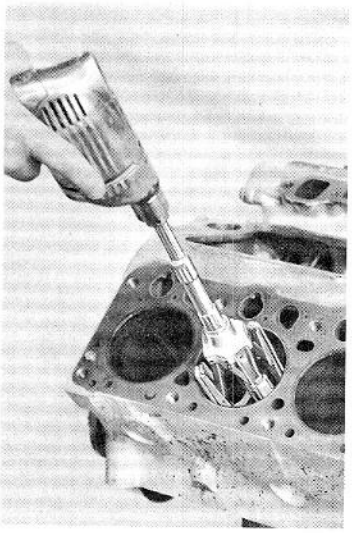
CYLINDER BORE SURFACING HONE

C-3501 Range 2" to 7" diameter.

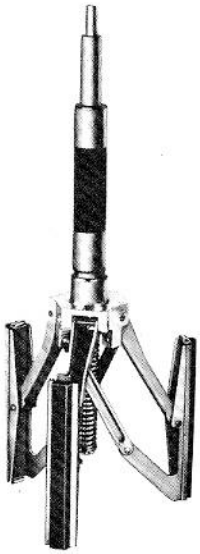
Removes Cylinder Wall Glaze For Fast Seating of Piston Rings.

- **Surfaces cylinders in only 20 seconds.**
- **Eliminates come-backs on ring jobs.**
- **Oversizing impossible—removes glaze and toolmarks only, cylinder contour is not altered.**
- **Fits all cylinders within range with no adjustment.**
- **Buffing guides prevent flying dust.**

This type of Hone is often described as a "glaze breaker", and is not intended to remove any metal. The extensive use of hard surfaced piston rings in current model engines often requires the use of this type Hone to break the cylinder wall glaze sufficiently to allow a set of rings to seat properly and control blow-by and oil consumption.



Hone has flexible drive coupling, weighs only 2 pounds. Keep stones washed clean to prevent loading—clean cylinder thoroughly after resurfacing with soap and water—not kerosene.



C-3501
Range 2" to 7"

Special 280 Grit Stones Supplied To Meet Chrysler Engineering Requirements.

This surfacing hone is packaged with special grit stones to provide the proper micro-inch finish Chrysler engineers have found best for maximum oil mileage. Desirable cross hatch pattern is obtained by operating at 20 strokes in 20 seconds.

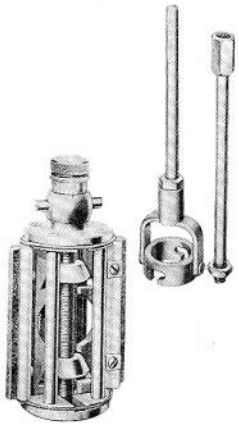
CYLINDER BORE RESIZING HONES

500 Range 2½" to 4⅛" diameter.

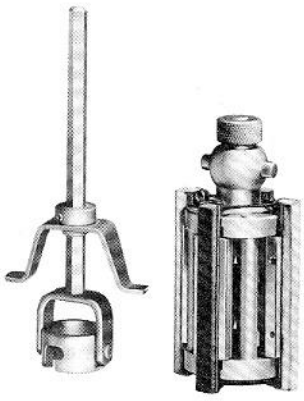
1450 Range 1-13/16" to 2¾" diameter.

For Correcting Worn, Tapered and Out-of-round Cylinder Bores.

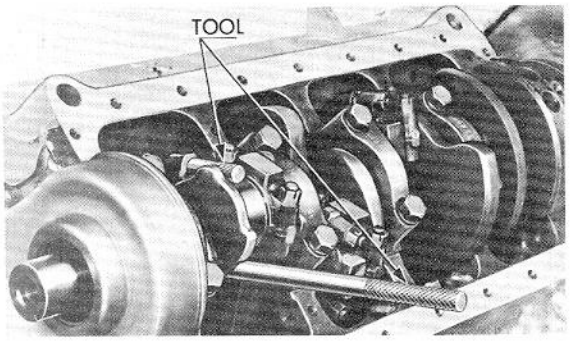
This type of Hone should not be used for removing cylinder wall glaze. They are designed for fast accurate removal of metal such as is necessary in honing worn cylinders for new pistons and rings. These two models cover a range from 1-13/16" to 5¾" for wide application. Extension available to increase range of Model 500 to 5¾". Self-lubricating—No dangerous flying dust—Spring maintains honing pressure—Designed for use with any ½" electric drill.



Model 500
Range 2½" to 4⅛"



Model 1450
Range 1-13/16"
to 2¾"

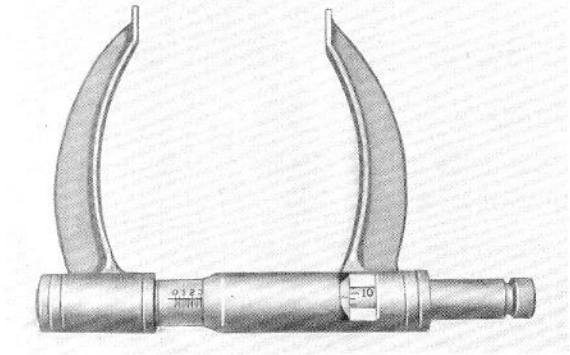


PISTON AND CONNECTING ROD REMOVING AND INSTALLING TOOL

C-3221 For all Plymouth, Dodge, DeSoto and Chrysler engines.

Allows One Man To Fit Piston And Rod Assemblies To Crankshaft.

Tool screws onto connecting rod cap bolt and is used to lead the rod and piston assembly through cylinder bore from underside of engine. Aluminum cap also supplied for opposite connecting rod cap bolt to protect crankshaft journal as rod is led into position.

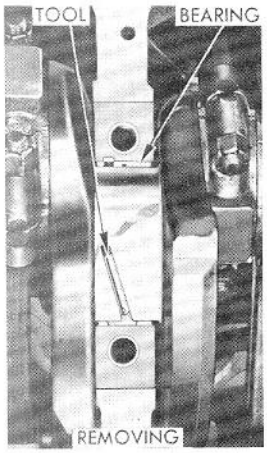


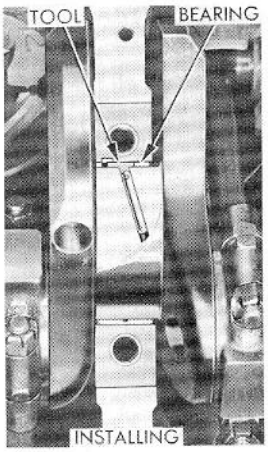
CRANKSHAFT BEARING JOURNAL MICROMETER

C-801 Range 2" to 3".

Allows Accurate, Direct Measuring Of Journal WITHOUT Removing Crankshaft.

It is no longer necessary to remove a crankshaft from the engine to measure it accurately for main bearings. Push out the upper bearing shell with a Miller bearing shell remover, and measure the journal with this pair of special micrometers just as you would with ordinary "Mics."



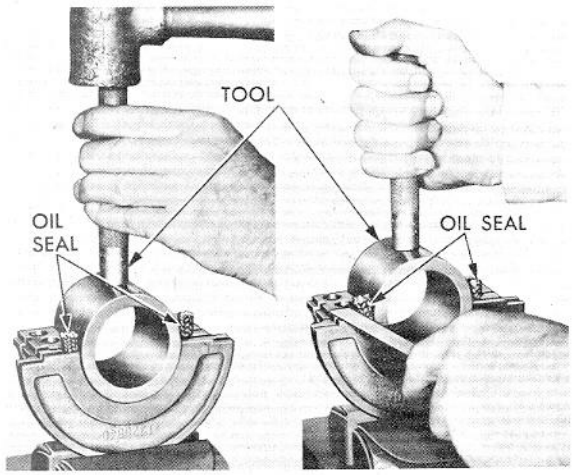


MAIN BEARING UPPER SHELL REMOVING AND REPLACING TOOLS

C-584 For all Plymouth, Dodge, DeSoto and Chrysler in-line engines.

C-3059 For all Plymouth, Dodge, DeSoto and Chrysler V-8 engines.

Every shop should have several of both sizes of these tools. They drop in the oil hole of the crankshaft and as the shaft is slowly turned the self-aligning head of the tool pushes the upper bearing half in or out of position. Do not use a nail — it may drop into oil hole of crankshaft or nick and destroy bearing shell.



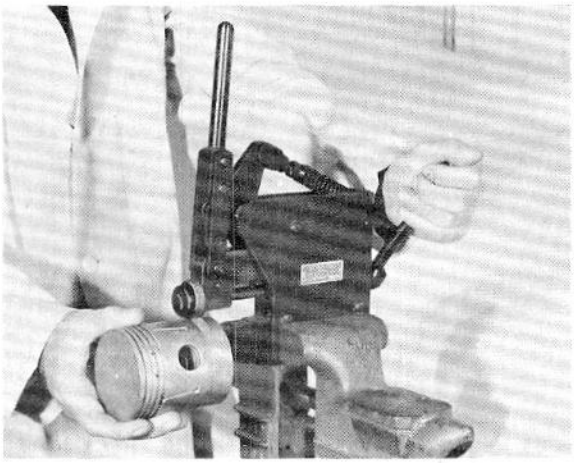
REAR MAIN BEARING OIL SEAL INSTALLING AND FITTING TOOLS

C-3020 For all Chrysler V-8's.

C-3131 For all Plymouth, Dodge and DeSoto V-8's thru 1955.

C-3511 For 1956 Plymouth, Dodge and DeSoto V-8's.

Accurate installation of these wick-type oil seals is most important for leak-proof control at the rear main bearings. These special tools pilot in the main portion of the bearing caps while forming the seals to the proper contours and predetermined depths. The seals can then be cut off flush as illustrated. Tools prevent seals from being crushed too flat or not formed enough. A seal cut too long, can cause a serious burn on crankshaft, one cut too short causes a serious oil leak.



PISTON KNURLING TOOL

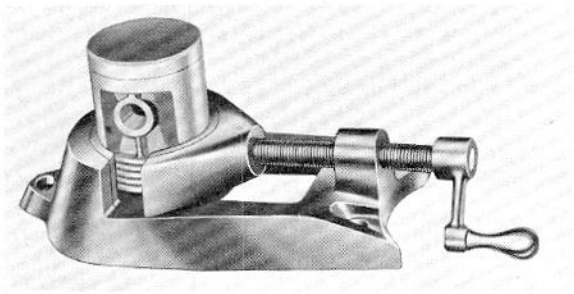
C-3040 For aluminum, steel and cast iron pistons.

For Resizing All Types of Pistons

Any mechanic can easily resize pistons quickly with this tool. Correct Knurl pressure is automatically maintained with heavy spring. Tool knurls inside of piston in opposite direction to knurl on outside of piston. This safely expands the skirt and eliminates danger of cracking piston. Piston can be knurled from lower ring groove to edge of skirt—one pass of knurl usually expands piston skirt .001".

Pay For Tool From Savings On Resizing Only 75 Pistons

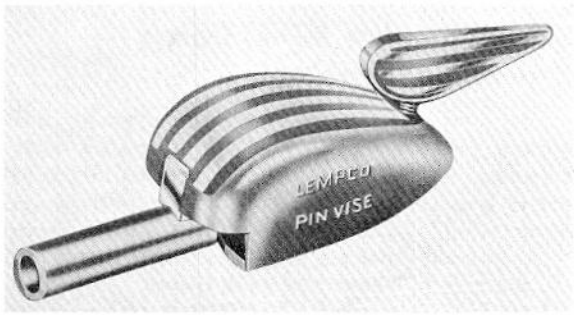
Why pay .60c to .75c per piston when, with this tool, you can resize a whole set of six for about ½ the cost of resizing a single piston. Takes only about ten minutes to resize six of most any make or size piston.



PISTON VISE

C-3092 Capacity up to 5½" Dia.

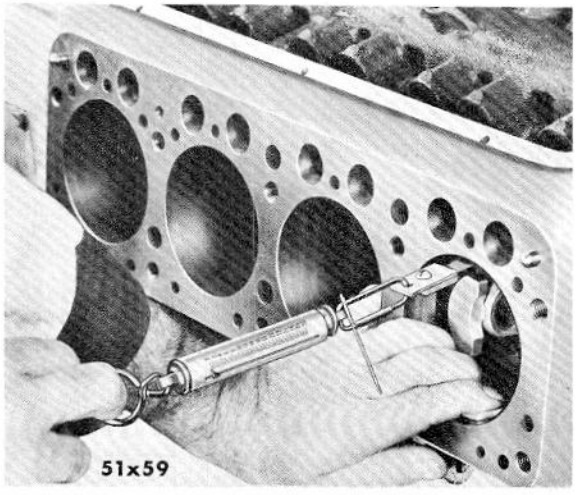
Every piston fitting department needs one or more fast operating piston vises like this. Soft metal lined jaws prevent damage to finished piston yet safely hold any size piston up to 5½" dia. in a firm non-slip grip. Crank type screw handle speeds up clamping operations. Ruggedly constructed for years of daily use.



PISTON PIN VISE

C-3093 Accommodates all sizes including those with straight and tapered bores.

A handy specialized pin vise such as this will speed up the fitting of piston pins. Piston pin is held securely and can't slip or skid, or become scratched or scuffed. Safely holds all sizes of pins without distortion. Mount one on the bench next to your reamer drive and another beside your honing machine.



PISTON FITTING GAUGE AND SCALE

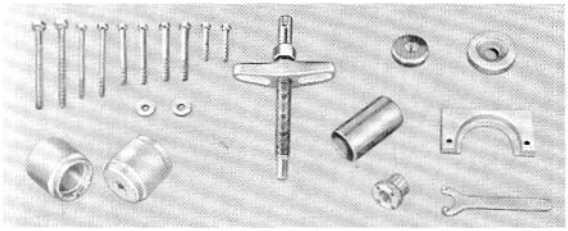
C-690 For all engines including V-8's.

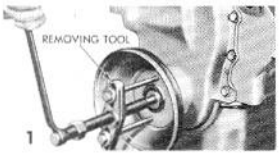
Accurate, uniform fitting of pistons in the cylinder bore according to factory specifications require this dependable brass 30 lb. pull scale. It is calibrated in 4 oz. graduations and fitted with .0015", .002" and .003" thickness gauges which are gripped with a simple clamp. This clamp does not require a re-inforced pull-eyelet in the thickness gauge stock.

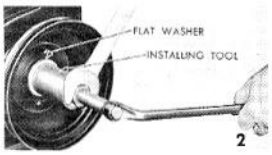
EXTRA THIN FEELER STOCK AVAILABLE

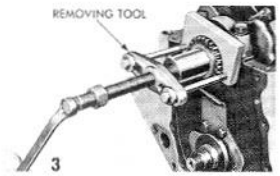
Because of the ever increasing need of .0015" and .002" stock for special checking requirements, we now list this stock separately:

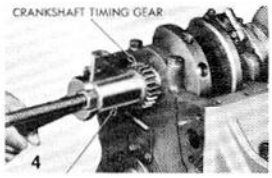
C-3100 .002" x ½" wide feeler stock 4 one-foot lengths.
C-3101 .0015" x ½" wide feeler stock 3 one-foot lengths.

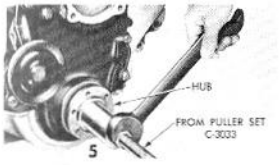












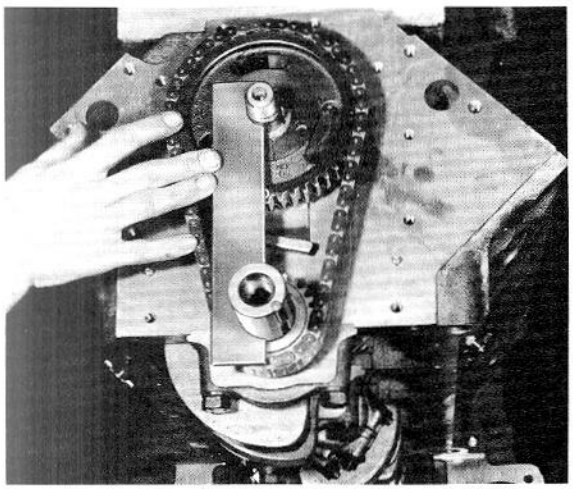
1. Pulls Fan Pulley And Neutralizer.
2. Presses Pulley Or Neutralizer Onto Crankshaft.
3. Pulls Crankshaft Gears.
4. Installs Crankshaft Gears.
5. Installs Neutralizer Hub.

ENGINE FRONT END PULLER KIT

C-3033 For all Plymouth, Dodge, DeSoto and Chrysler engines.

Removes And Replaces Impulse Neutralizer, Crankshaft Gear And Fan Drive Pulley.

Save time and possible ordering of incorrect tools by obtaining this complete kit for these common but important service operations. Kit includes two sizes of crankshaft nut sockets which fit standard ½" square drive wrench handles. A "close-coupled" puller allows most neutralizers to be removed without removing radiator. The half plate puller drops in the crankshaft gear groove and attaches to the puller with one of the five various sets of cap screws supplied. A special "anchor" nut is also provided for crankshafts with large I.D. threads. The small spanner is used to remove this anchor nut if it is tightened too tight to remove by hand. Protector plates are included to slip between end of puller screw and crankshaft. Short sleeve is used with puller to press crankshaft gear into position. Use of kit eliminates need of hammering on end of crankshaft, saves time and does complete job faster and easier.

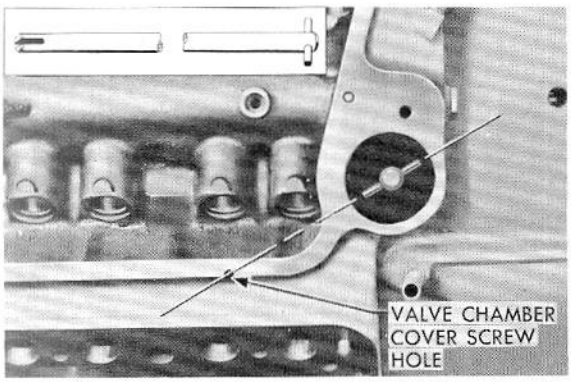


TIMING CHAIN AND SPROCKET ALIGNING GAUGE

C-3231 For all Plymouth, Dodge, DeSoto and Chrysler V-8 engines thru 1955.

Avoids Lost Time Thru Mismatching Timing Marks On Sprockets.

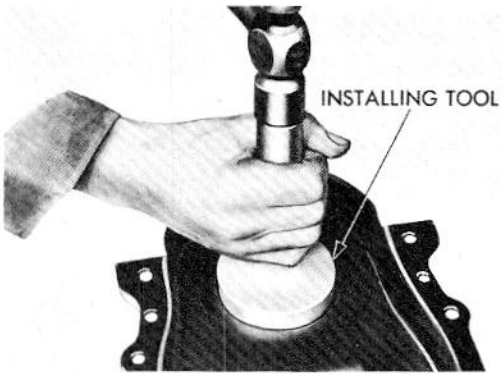
The crankshaft and camshaft sprockets are easily and quickly aligned with this special gauge to assure accurate valve timing. Accurately machined notches in gauge fit over ends of crankshaft and camshaft, bringing gauge directly against sprocket. Attempting to align these sprockets with a straight edge may result in assembling the timing chain one tooth off alignment. This will cause a serious drop in engine performance and require considerable extra work to correct.



OIL PUMP DRIVE GEAR ALIGNING TOOL

C-3027 For all Plymouth, Dodge, DeSoto and Chrysler V-8's.

Much time and effort can be saved by using this simple tool to properly index the oil pump before dropping the distributor drive gear and shaft in place. The illustration shows how the handle type indexing pin is lined up with valve chamber cover screw hole. Proper indexing of the oil pump is necessary to allow correct installation of distributor. See factory service manuals for specific alignment instructions on various engines.



CHAIN CASE COVER OIL SEAL REMOVING AND INSTALLING DRIVERS

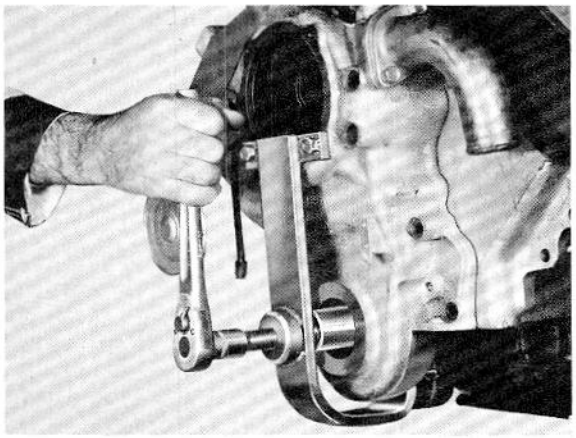
C-3050 Removing Driver for all Plymouth, Dodge, DeSoto and Chrysler V-8's thru 1955.

C-3051 Installing Driver for all Plymouth, Dodge, DeSoto and Chrysler V-8's thru 1955.

For Servicing 1956 Cars See Tool C-3506 on Page 82

The small area of the oil seal accessible for driving it from the chain case cover makes it important to use this low cost driver to avoid damage to the cover casting.

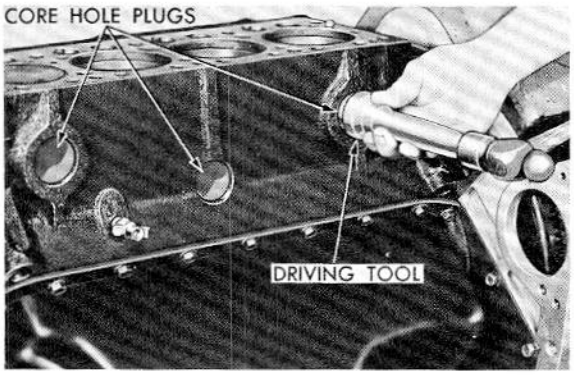
The installing driver protects the oil deflecting flange of a new seal and distributes the driving pressure over the full outside diameter of the seal. This assures a properly installed seal.



TIMING CHAIN CASE COVER PULLER

C-3134 For all DeSoto and Chrysler V-8's thru 1955.

The timing chain case cover fits snugly over two alignment dowels, and can prove quite difficult to remove if this special tool is not available. Works with radiator in place. Tool hooks under bottom edge of cover and attaches with two lower water pump housing cap screws. Pulling pressure is direct against crankshaft and square with dowels.

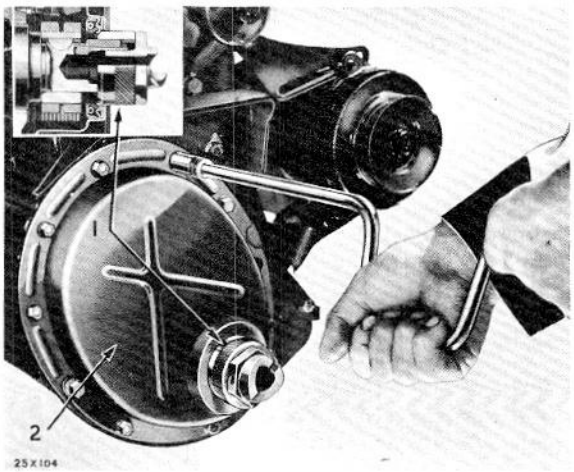


WELSH PLUG DRIVERS

C-897 For camshaft end plug on Plymouth, Dodge, DeSoto and Chrysler V-8 engines.

C-3151 For cylinder block coolant expansion plugs on Plymouth, Dodge, DeSoto and Chrysler V-8 engines.

The correct driver is essential for properly installing welsh plugs. These drivers have the exact contour machined into their driving face to securely lock a new plug safely in place as shown. The C-897 Driver is essential to replace the welsh plug which must be removed to allow removal and replacement of the camshaft rear bearing.

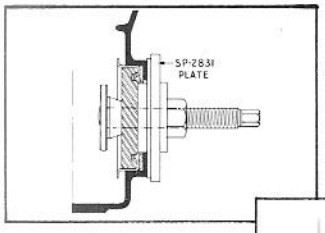


ENGINE TIMING GEAR CASE COVER LOCATING SLEEVE

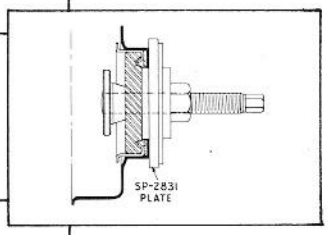
C-522 For All Plymouth, Dodge, DeSoto and Chrysler In-Line Engines thru 1955.

Helps Prevent Front End Oil Leaks

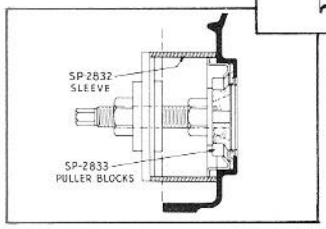
Costly and annoying oil leaks can often be avoided at the timing chain case cover oil seal if this simple tool is used when assembling the cover. The inside diameter of this hardened sleeve is ground to a close slip fit on the crankshaft. A ground tapered outer diameter of the sleeve fits the metal portion of a new seal. This allows the timing case cover to be accurately centered before and while it is being bolted in place. A clearance slot in the sleeve eliminates the need of removing the key from the crankshaft. The crankshaft nut, tightened finger tight, will hold the sleeve in position while the cover is bolted in place.



SP-2831 Plate With Tool To Install Seal in Pressed Cover.



SP-2831 Plate Has Been Turned Over And Is Now Gauging Depth Of Seal In Cast Type Cover.



SP - 2831 Plate Fits In SP-2832 Sleeve When Pulling Seal from Either Type Cover.

CHAIN CASE COVER OIL SEAL REMOVING AND INSTALLING TOOL

C-3506 For all 1956 Plymouth, Dodge, DeSoto and Chrysler engines.

Tool Automatically Installs New Seal To Correct Depth To Assure Leakproof Seal.

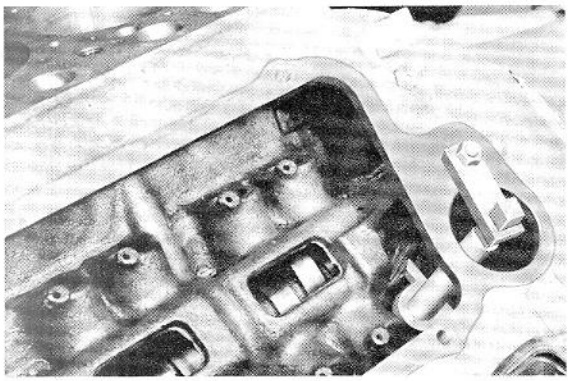
The three sketches at left show how this simple tool is used to correctly remove and install the new type seal in either the cast or pressed type covers. Notice how the SP-2831 Plate is reversed to draw the seal to its proper depth to assure the desired pressure on the sealing rubber in both the cast and pressed type covers. After installation check tightness of seal by attempting to insert a .003" feeler between cover and sealing rubber.

CAMSHAFT GEAR INSTALLING TOOL

C-3509 For all 1956 Plymouth, Dodge, DeSoto and Chrysler engines.

Holds Camshaft And Avoids Accidental Loosening Of Rear Welsh Plug.

This simple tool that is inserted in the distributor shaft bore, drops behind the distributor drive gear on the camshaft and prevents it from moving backwards as the camshaft sprocket is installed. Attempting to install the sprocket without this tool may force the camshaft back against the rear welsh plug and cause a serious oil leak that would be costly to repair.



Protected By U.S. Patent 2,575,503.

TRUCK WHEEL STEP

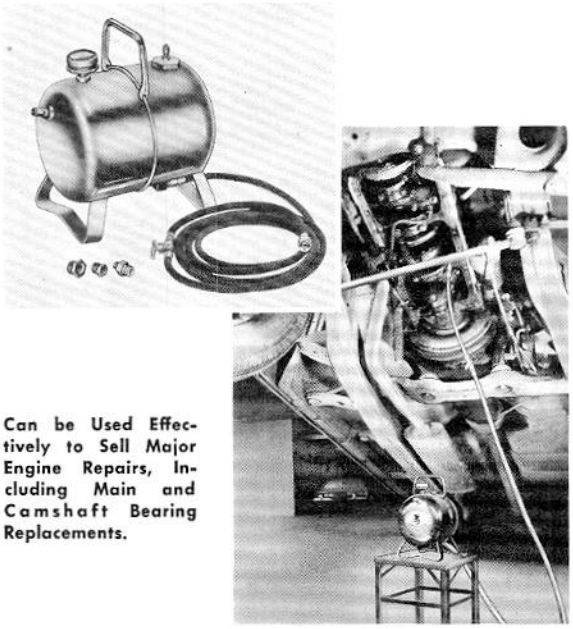
DD-948 For all trucks.

Makes It Easy For Tall Or Short Mechanics To Service Truck Engines Faster.

The large, massive front end design of all modern trucks makes it practically impossible for a mechanic to reach and make common engine adjustments and repairs while standing on the floor. The Miller Step fits over all sizes of truck front wheel tires and provides a large, safe comfortable working platform adjustable for tall or short mechanics. It eliminates the necessity for using dangerous, unsightly boxes or benches.

Avoids Stretch And Strain—Step Is Safe For Biggest Mechanic Plus Heavy Load.

Many modern shops now provide each truck engine mechanic with his own Step. Also very helpful in the showroom to make it easy for new truck prospects to see latest engine improvements.



Can be Used Effectively to Sell Major Engine Repairs, Including Main and Camshaft Bearing Replacements.

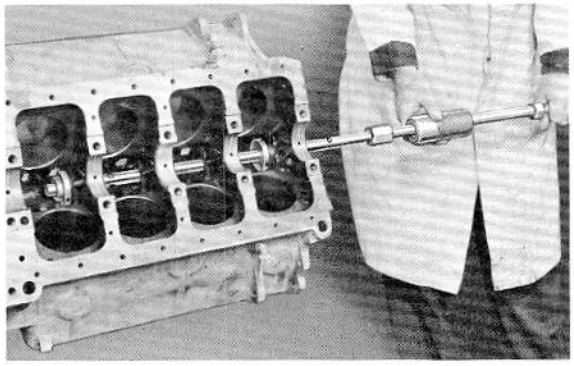
ENGINE BEARING WEAR DETECTOR TANK

C-776 Complete with fittings, hose, pressure gauge, etc. For all engines including V-8's.

Provides Dependable, Visual Method Of Checking Bearing Wear.

Use of this tank to check oil lines, worn bearings, leaking connections, etc. before tearing down an engine will be very helpful in correctly diagnosing excessive oil consumption. It is also very valuable to inspect an engine rebuilding job before final assembly to determine if cam and main bearings, etc. are being properly lubricated or if too much oil is being pumped by bearings. Tank is light, compact and supplies oil at a constant predetermined pressure to entire engine lubrication system.

Tank is used with engine oil pan removed and with engine turning over slowly with starter.

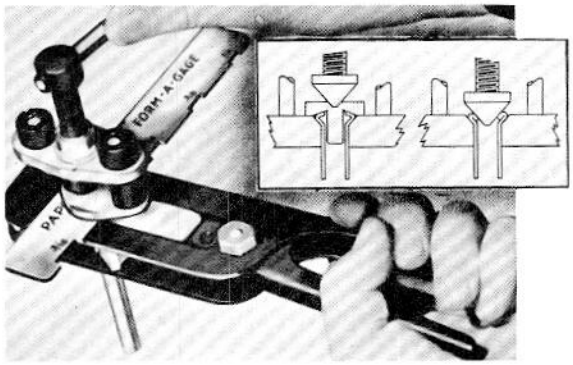


CAMSHAFT BEARING REMOVER AND REPLACER

C-536 Complete with 3 adapters for all Plymouth, Dodge, DeSoto and Chrysler In-line engines, except Dodge 3-ton trucks.

C-3132 Includes complete C-536 plus adapters SP-1147, SP-1434, SP-1435, and SP-1436. To service all Plymouth, Dodge, DeSoto and Chrysler In-line and V-8 engines.

Tool is purposely designed to permit removal or installation of each bearing individually. This allows an aligning adapter to be installed in bearings on either side of bearing being serviced. Each adapter is machined to fit finished bearing size and block bore. This permits each adapter to pilot directly in the block when bearing is removed and to also pilot draw bar in finished bearing. Adapters are ground to smooth, accurate, bearing size to prevent bearing from collapsing or distorting while being drawn into position. A single horseshoe-type plate is supplied to lock adapter to draw bar. Impact weight provides extra speed and economy for this type puller. Installs bearings ready for camshaft, no reaming necessary.



TUBE FLARING AND CUTTING TOOLS

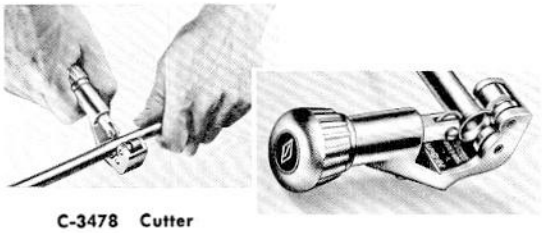
C-804 Flaring Tool For Single and Double Flares on ½", ⅜", 5/16", ¼" and 3/16" Tubes. Also Single Flares on ⅝" Tubes.

C-3478 Tube Cutter, For ⅛" to 1" O.D. Tubes.

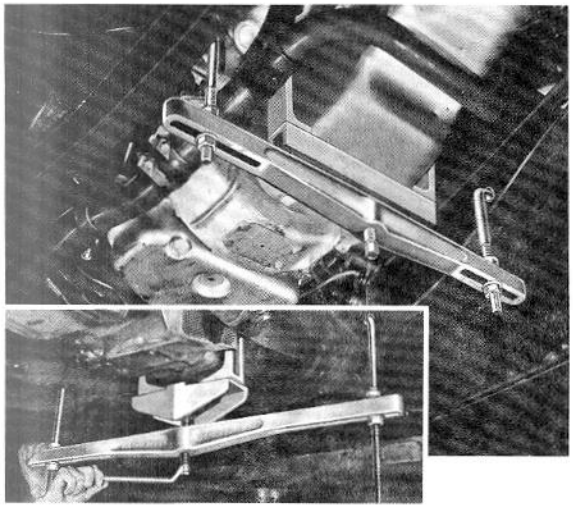
Essential For Safe 45° Double Flared Joints In Brake Lines, Air Conditioning, Etc.

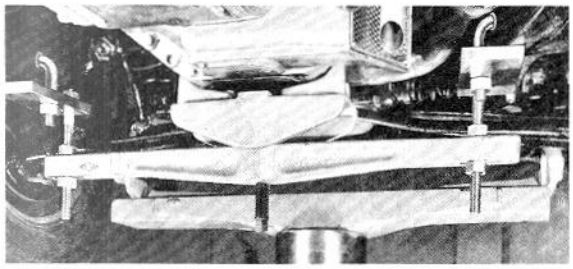
Save time and inconvenience by using these tools to make immediate replacement oil lines, brake lines, air lines, etc. from standard lengths of steel or copper tubing. Both tools are hand-operated making them ideal for on-the-spot repairs.

Tube cutter is equipped with ball thrust bearings for easy operation. Leaves no burrs or chips to clog line; leaves tubing round, ready for flaring. Note how groove in rollers allows a cracked flare to be cut off without wasting tubing—often allows same tube to be re-flared and re-used.



C-3478 Cutter





ENGINE SUPPORT FIXTURES

C-3487 New, wider fixture for all 1951 thru 1956 Plymouth, *Dodge, DeSoto and Chrysler cars equipped with Power-Flite transmissions. Also fits Dodge trucks with pair of DD-1223 Adapter Brackets (see page 130).

*See C-3389.

C-3389 Outrigger brackets for 1953 and 1954 Dodge Royal Diplomats and Coronet Sport Coupes.

*C-3487 Fixture complete with C-3389 Brackets may be ordered under Tool No. C-3489.

C-3488 New, wider cross beam and pair of new design hook bolts to adapt earlier C-3245 Fixture to 1955 and 1956 models.

Essential To Support Engine While Removing Or Installing Transmission

Changing a transmission, torque converter, or other service work involving the removal of the transmission requires taking out the engine rear mounts. This fixture is used to safely support the engine temporarily while the engine mount is removed. The adjustable brackets of this fixture cradle the engine and safely support it from the oil pan flange. Hanger bolts fit into standard holes in frame side rails. Most frames have properly spaced holes on the inner flange of the frame, however fixture can also be installed when holes for hanger bolts are in the outer frame flange—see insert.

Car Can Be Safely Moved With Fixture In Place.

Fixture has its own built-in, powerful jack screw. This often avoids tying up a car hoist or an active work stall while transmission is repaired. Lower, left-hand illustration shows how C-3389 Outrigger Support Brackets are used.

DELUXE SPARK PLUG CLEANER AND TESTER

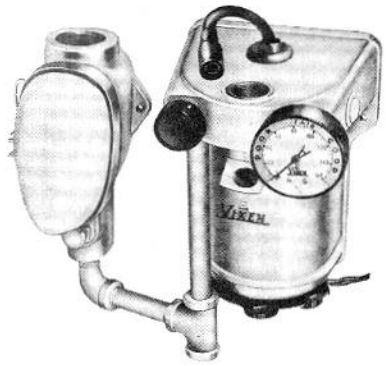
No. 400 Complete For All 10 mm, 14 mm, 18 mm, and ⅞" Spark Plugs.

Here is an attractive combination cleaner and tester that will put real meaning into spark plug merchandising. It provides convincing proof of spark plug efficiency. Use it to clean used plugs and then compare them with new plugs—under simulated operating conditions. Recessed mirror makes it easy to see plugs firing under normal combustion chamber pressures as indicated by pressure gauge. Cleaner automatically separates dirt from cleaning compound, making unit especially economical to operate. Drawer in base provides convenient storage for adapters and test plugs.

EXTRA CLEANING ABRASIVE AVAILABLE

C-813 5 lb. Crisilite Abrasive complete with replacement cleaner bag and rubber grommet.

Maintain the efficiency of these cleaners by continuing to use Crisilite—the same abrasive as supplied with them originally.

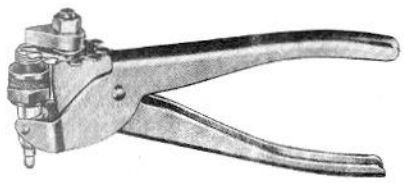


STANDARD SPARK PLUG CLEANER AND TESTER

No. 135 Cleaner complete with Tester for all 10 mm, 14 mm, 18 mm, and ⅞" spark plugs.

C-812 Spark Plug Cleaner only. Complete with 5 lb. package of Crisilite Cleaning Abrasive.

Step up the efficiency of your mechanics and shop by installing a number of these low-cost units close to each pair of work benches. It contains all of the basic features of the Deluxe Model at a low enough cost to warrant multiple installations, to encourage consistent cleaning and testing of spark plugs on every job brought into your shop. Adaptable to bench or wall installations.

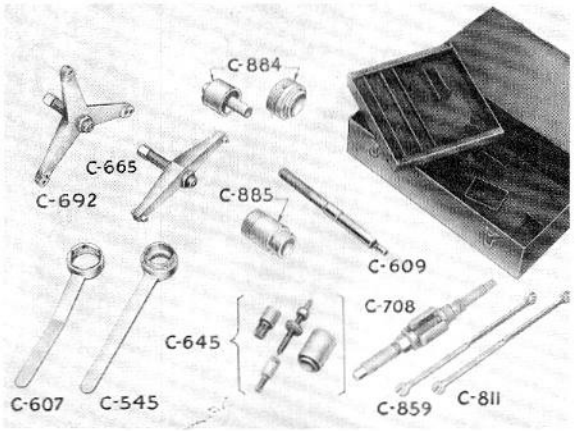


SPARK PLUG GAPPING TOOL

CF-70 For all popular spark plugs.

Fast—Automatic—Provides Uniform Parallel Gap.

Here is an inexpensive tool that uniformly gaps all 10 mm thru 14 mm single ground, electrode spark plugs, with the simple squeeze of one hand. Gauge dial has ten different settings to service plugs with gaps varying from .022" to .040".



C-887 For Chrysler Dealers

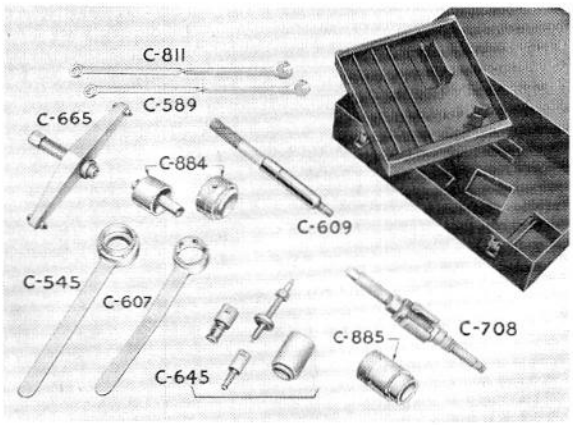
FLUID DRIVE SERVICE TOOL KIT

C-887 For all Dodge, DeSoto and Chrysler cars equipped with fluid drives.

This kit of specialized tools should be an essential part of every Chrysler dealer's service department. With these tools and the information contained in the factory service bulletins and repair manuals all necessary Fluid Drive repairs and maintenance become as simple and easy as the most elementary service.

C-887 KIT CONTAINS:

C-545	Oil Seal Retainer Nut Wrench
C-589	Fluid Drive to Crankshaft Nut 5/8" Wrench
C-607	Clutch Backing Plate Retainer Nut Wrench
C-609	Clutch Driven Plate Aligning Arbor
C-645	Runner Hub Bearings or Bushings Puller
C-665	9" Dia. Clutch Driving Plate Puller
C-692	10" Dia. Clutch Driving Plate Puller
C-708	Runner Hub Bushing Driver and Burnisher
C-811	F. D. To Crankshaft Nut 11/16" Wrench
C-884	Seal Spring and Snap Ring Installing Tool
C-885	Floating Seal Ring Installing Tool
1090	Metal Case



C-890 For Dodge and DeSoto Dealers

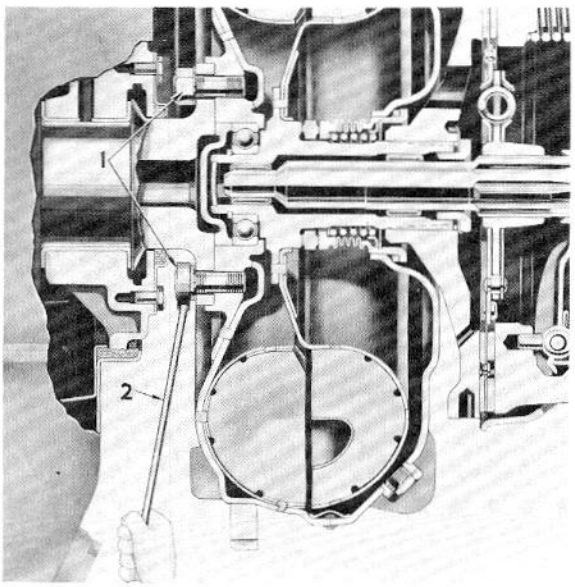
FLUID DRIVE SERVICE TOOL KIT

C-890 For all Dodge, DeSoto and Chrysler Six Cylinder cars equipped with Fluid Drives.

The additional tools required for servicing the larger Fluid Drive Units have been left out of this kit. See the following pages for detail illustrations of how all Fluid Drive service tools are used.

C-890 KIT CONTAINS:

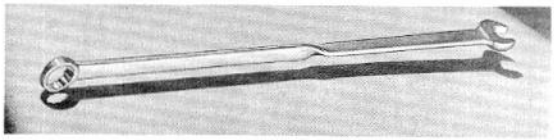
C-545	Oil Seal Retainer Nut Wrench
C-589	Fluid Drive to Crankshaft Nut 5/8" Wrench
C-607	Clutch Backing Plate Retainer Nut Wrench
C-609	Clutch Driven Plate Aligning Arbor
C-645	Runner Hub Bearings or Bushings Puller
C-665	9" Dia. Clutch Driving Plate Puller
C-708	Runner Hub Bushing Driver and Burnisher
C-811	Fluid Drive to Crankshaft Nut 11/16" Wrench
C-884	Seal Spring and Snap Ring Installing Tool
C-885	Floating Seal Ring Installing Tool
1091	Metal Case



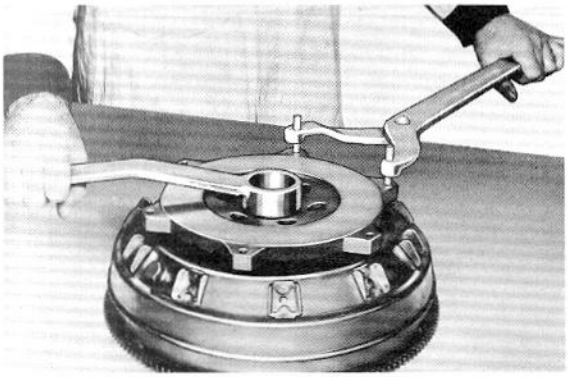
FLUID DRIVE TO CRANKSHAFT STUD NUT WRENCHES

C-589 For all fluid drive units with 5/8" hex. attaching nuts.

C-811 For all fluid drive units with 11/16" hex. attaching nuts.



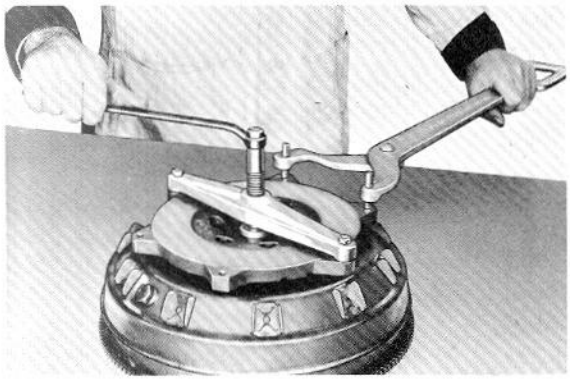
Illustrated above and marked with arrow #2 in illustration to the left is the improved Miller design of these indispensable wrenches. They work in the limited space between the engine oil pan and fluid drive or converter unit. The 90° twist in the handles of these forged wrenches allow them to flex at approximately 70 foot-pounds, automatically signalling the user that the nut is tight enough. This avoids accidental breakage by men attempting to tighten nuts too tight. Specifications require nuts to be tightened to only 55-60 foot-pounds. Order several of each size—have spares on hand.



CLUTCH DRIVING PLATE RETAINER NUT WRENCH

C-607 For all Fluid Drive Units.

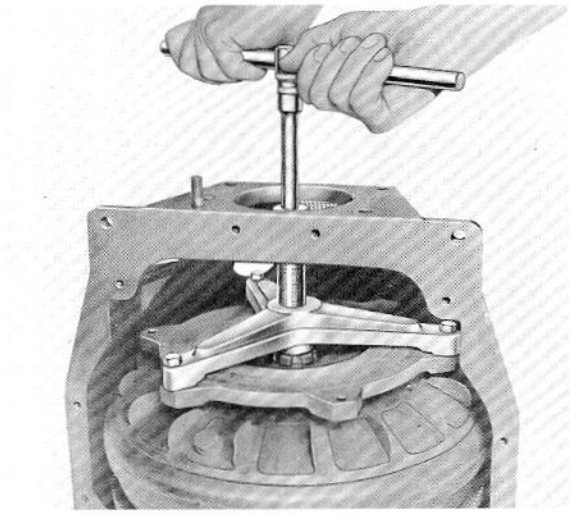
This special wrench with its offset handle is much easier to use than an ordinary socket large enough to fit this big nut. The C-3281 Wrench shown holding the driving plate is specifically made for holding the universal joint companion flange, but does double duty by safely holding the driven plate during several Fluid Drive service operations.



9-INCH CLUTCH DRIVING PLATE PULLER

C-665 For All Dodge, DeSoto and Chrysler 6 Cylinder Models Equipped with Fluid Drive Units.

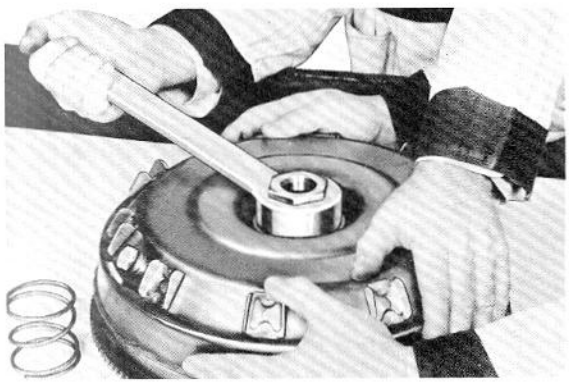
The clutch driving plate can be quickly and safely removed from the fluid drive runner hub with this puller which bolts to the face of the plate with two standard cap screws. May be used with fluid drive unit in or out of the car. Order C-3281 Holding Wrench as a separate tool.



10-INCH CLUTCH DRIVING PLATE PULLER

C-692 For Chrysler 8 Cylinder Models with Fluid Drive Units.

Prying the clutch driven plate from the Fluid Drive unit with a pinch bar can cause serious damage to Fluid Drive housing. Avoid this chance for unnecessary damage by using this easy-to-use fast puller. Can be used with Fluid Drive unit in or out of car.

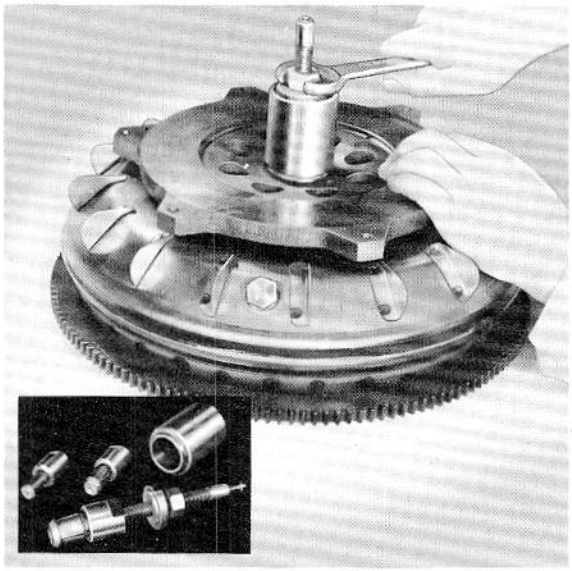


OIL SEAL RETAINER WRENCH

C-545 For all Fluid Drive Units.

Fits Units With Either Bellows Or Housing Type Seals.

If one Fluid Drive wrench or tool could be considered most essential, this wrench would unquestionably be it. The driven plate retainer nut should be used to hold this wrench tightly in the small notches machined in the oil seal retainer. Larger shops should have two or more of these important wrenches.

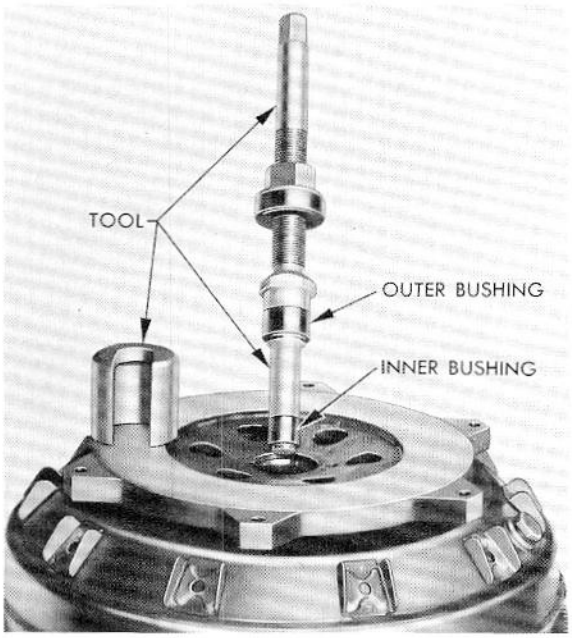


RUNNER HUB BEARING AND BUSHING PULLERS

C-625 Complete with 3 sizes of puller heads to service all Fluid Drive Units.

C-645 Puller with 2 sizes of puller heads to service all Fluid Drive Units except front bearing on 1939 to 1942 Chrysler Eights.

Removing runner hub needle bearings or oilite bushings is simple with this expansion head type tool. Each of the three different size heads screw onto the single main puller screw. An expansion plunger in the main screw contacts the expander plunger in each puller head. This allows the user to easily locate and lock puller head jaws behind the proper bearing or bushing in the "blind" bore of the runner hub housing. Each puller head can be serviced separately. See your factory service manual for detail service instructions.



Tool Is Used To Install BOTH Bushings Simultaneously—Keeps Them From Collapsing.

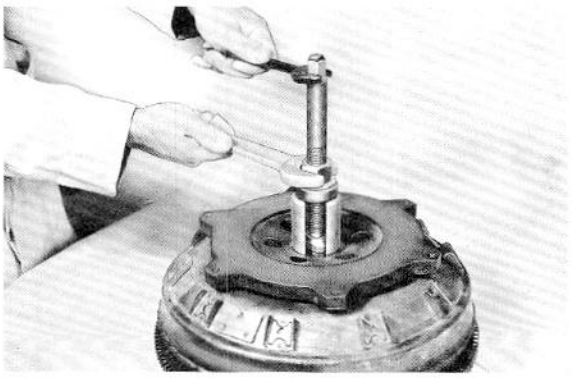
RUNNER HUB BUSHINGS INSTALLING AND BURNISHING TOOLS

C-708 For all Fluid Drive units **except** those used in 1939 to 1942 Chrysler Eights.

C-790 For Fluid Drive units used in 1939 to 1942 Chrysler Eights.

One Tool Installs and Burnishes Both Bushings Simultaneously.

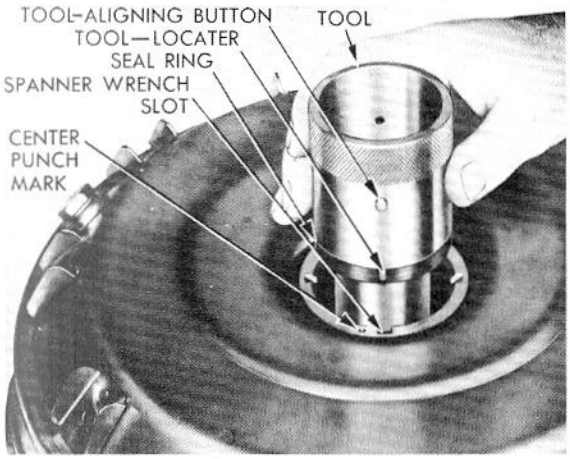
These are dual purpose tools—they are used as drivers to properly install new bushings and to accurately finish them to size as the tool is removed with the split sleeve and thrust bearing. Both bushings are installed and burnished simultaneously. In addition, they securely swedge the bushings tight in the housing bore as the burnisher is withdrawn. These oilite bushings should not be reamed. A tight fit of these bushings on the transmission shaft may cause gear clashing during both manual and automatic shifting. Burnishing portion of tools is ground to finish bushings with proper clearance on transmission shaft.



Removing Tool Automatically Burnishes Bushings To Size.

Tools May Be Used With Fluid Drive In Or Out Of Car.

Both tools are made extra long so as to extend through the clutch housing and make them easy to use when the Fluid Drive is serviced in the car. They may also be used when the Fluid Drive is removed. Split sleeve and thrust bearing makes it easy to use these tools even when new replacement bushings are slightly undersize.

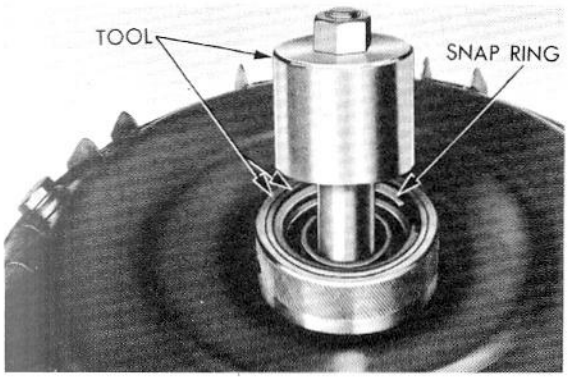


HOUSING TYPE SEAL RING INSTALLING TOOL

C-885 For 1950 and later Fluid Drive Units equipped with housing type seals.

Before attempting to use this or the following C-884 Tool be sure and read the detail illustrated instructions in your factory service manual outlining the proper method of servicing this type of seal.

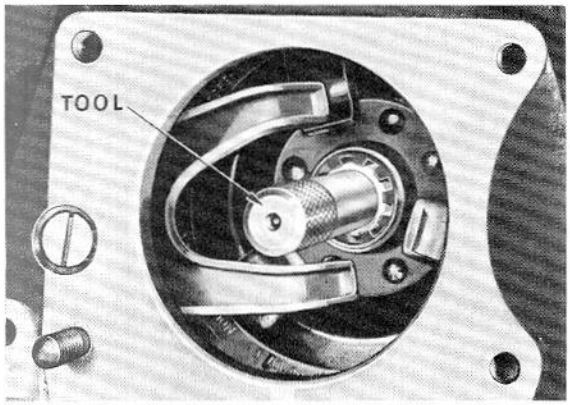
This and the C-884 Tool should be ordered at the same time as they are used in the same service operations. Because of the delicate nature of these tools, they are supplied in a wood-lined metal case.



HOUSING TYPE SEAL SPRING AND SNAP RING INSTALLING TOOL

C-884 For 1950 and later Fluid Drive Units equipped with housing type seals.

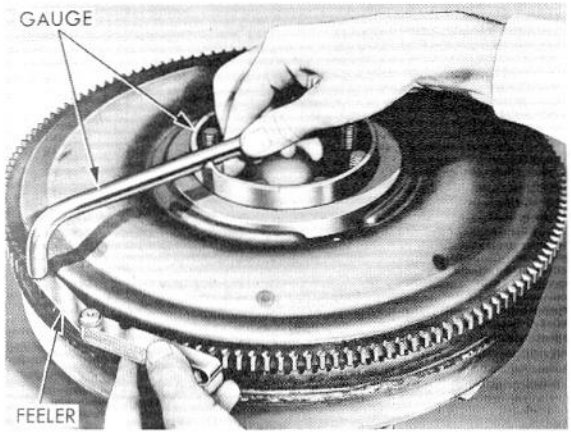
The ground angular pilot of this tool accurately locates it in the seal housing so that the snap ring and spring can be safely installed by a single quick pressure action on the upper end of the tool.



CLUTCH DRIVEN PLATE ALIGNING ARBOR

C-609 For all Fluid Drive equipped cars.

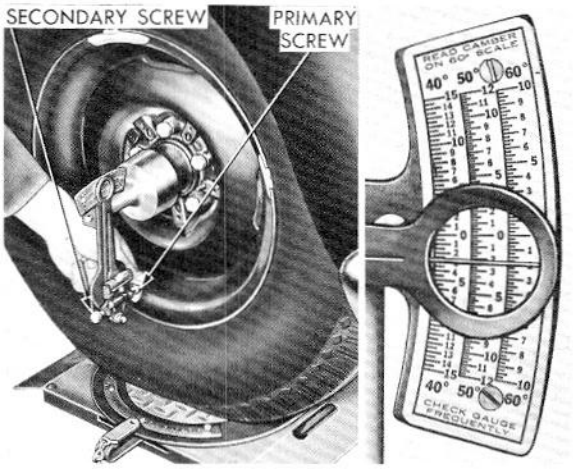
This special arbor pilots in the two runner hub bearings to accurately align the driven plate before the clutch pressure plate is fastened in position. Care in accurately aligning the clutch driven plate will assure smooth, dependable clutch performance.



STARTER RING GEAR ALIGNMENT GAUGE

C-896 For all Fluid Drive units except those used in 1939 to 1942 Chrysler Eights.

Be sure of accurate alignment of a replaced starter ring gear by using this simple, low-cost gauge as illustrated. Use a .020" feeler gauge between ring gear and gauge. Miller Cyclebond Oven will safely heat and expand a replacement starter ring gear without any danger of warping or annealing it. Heating starter ring gears with a blowtorch often causes premature failure of the gear teeth.



NEW MAGNETIC-HUB GAUGE CHECKS CASTER, CAMBER, AND King Pin Inclination FASTER

C-3409 For all cars and trucks.

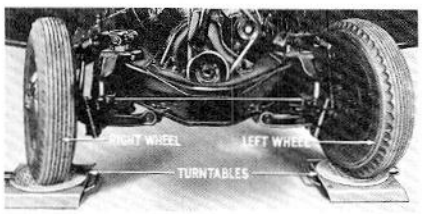
No Bolts To Tighten—No Clamps To Attach.

Large, powerful, 6 pole magnet clamps this gauge securely to the steel wheel hub. There is no chance for accidental movement to cause inaccurate readings. Primary and secondary adjustments are made exactly as with the DD-428 Gauge. Ideal for leaving in position and watching correction as wheels are adjusted. Weighs only three pounds, and is easy to use on the floor, in pits or on floor racks, and on cars with low fender skirts. C-3414 Tool Kit will convert DD-428 Gauge to C-3409 Gauge.

STANDARD CLAMP-TYPE GAUGE ALSO AVAILABLE

DD-428 For all cars and trucks.

This design is still preferred by some wheel alignment specialists. Both gauges shown being used on DD-435 Turntables. C-3414 Tool Kit will convert DD-428 Gauge to C-3409 Gauge.

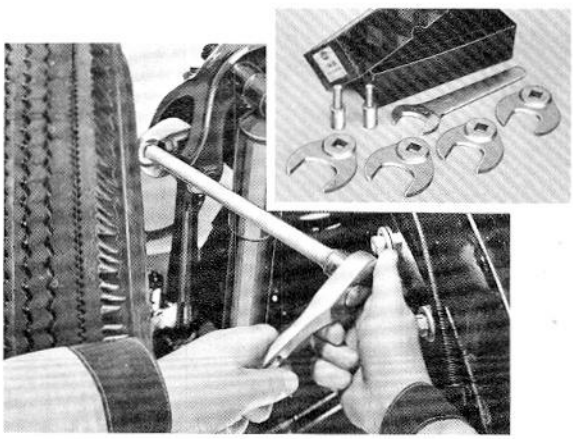


Turntables are used in Pairs — one under each front wheel

FULL FLOATING—DRIVE ON TYPE—TURNTABLES FOR WHEEL ALIGNING

DD-435 Pair—For all cars and trucks up to 7500 lbs. per wheel.

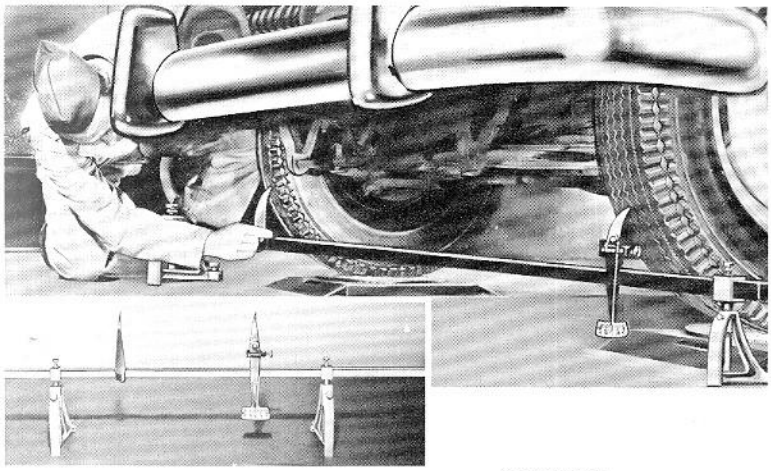
A pair of these rugged turntables is essential to any wheel alignment department. They allow accurate alignment readings with the full normal weight of the car on the front wheels. Each turntable follows all tire movements in any direction as large roller bearings provide smooth frictionless action. Adjustable degree scale eliminates any chance of error. A locking pin holds floating center plate until car is positioned. Finished in deep blue and orange with contrasting cadmium plate.



CAMBER ADJUSTING WRENCHES

N-7	7 Piece Wrench Set (shown in insert) for all popular cars. (Does not include C-3513.)
C-829	Crowfoot type—size 1-7/16"
C-830	Crowfoot type—size 1-1/2"
MT-269	Crowfoot type—size 1-5/16"
MT-271	Crowfoot type—size 1-3/16"
C-3513	Crowfoot type — size 1-13/32". For 1956 Plymouth, Dodge, DeSoto and Chrysler cars.

Every wheel alignment shop and specialist should have a set of these forged and milled opening wrenches. Open end crowfoot types fit ½" square drive socket wrench attachments.



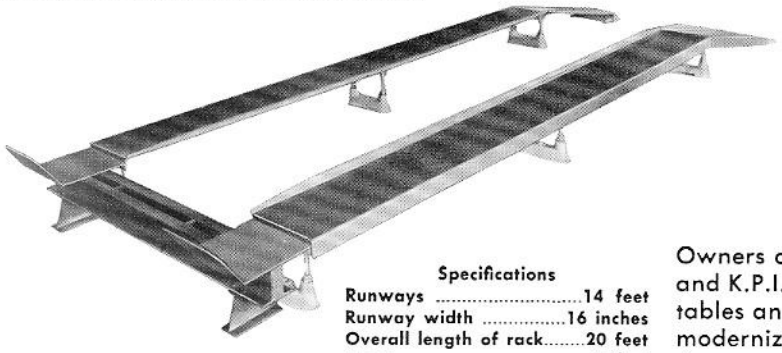
TOE-IN ALIGNMENT CHECKING GAUGE

C-3479 Complete for all cars.

C-3481 84" Wheel Base Extension.

New Type—Has Built-In Tire Scribers.

Gauge is first used in front of wheels as shown. After tires have been scribed, it is moved to rear of front wheels. It will check toe-in to 1/64" tolerance. C-3481 Extension adapts gauge to accurately check wheelbase by measuring from center to center of axles, or rim to rim of front and rear wheels.



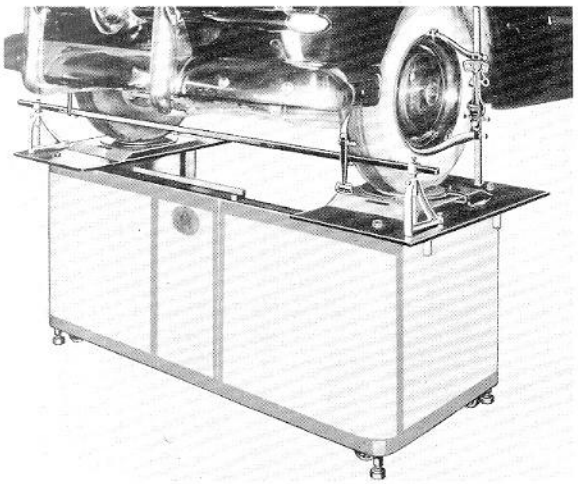
Specifications

Runways	14 feet
Runway width	16 inches
Overall length of rack	20 feet
Ramp	4 feet
Rack height	13½ inches

DRIVE-ON WHEEL ALIGNMENT RACK

CA-17 For use With Portable Wheel Alignment Gauges shown on previous page.

Owners of C-3409 and DD-428 Universal Camber, Caster and K.P.I. Gauges, DD-435 Turning Radius Checking Turntables and Toe-In Gauges including Wee Gee Boards, can modernize and expand their present wheel alignment department with this impressive rack and thus provide a complete front end alignment service.



PORTABLE ALIGNMENT TABLE

MT-289 Alignment Table less Gauges.

Converts Any Twin-Post Hoist Into Profitable Front End Department.

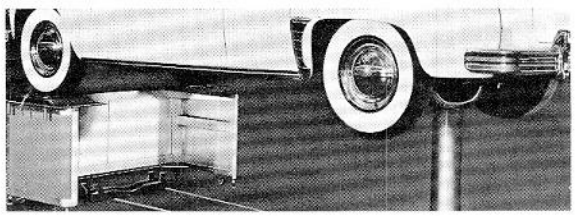
Large metropolitan dealers like this Table because it squeezes dual service from expensive, first floor space. It is also ideal for second floor service, or for smaller dealers whose limited service would not profitably support a specialized single purpose front end department.

Saves Floor Space—Your Present Portable Gauges Will Work On It!

All front end merchandising and service work can be performed on this rugged table with the same gauges you now use on the floor. Table raises car to convenient working height where it is easy to show your customers why their car needs service.

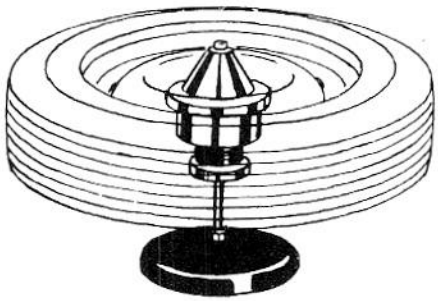
Specifications

Table 78" long, 34" wide and 32" high. It is fitted with 4 large free rolling casters and 4 combination leveling and floor lock pads. Net weight approx. 455 lbs., shipping weight approx. 600 lbs.



Easy To Use—Floor Need Not Be Level.

Quickly adjustable, leveling legs on each corner assure accurate alignment readings regardless of floor condition. Front post of hoist is lowered to floor to give ample working clearance. Rear post is lowered until rear wheels are level with front wheels.



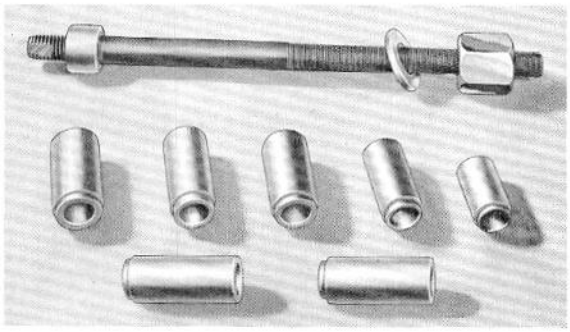
Guaranteed to balance wheels as accurately as any other Balancer on the American market, regardless of price.

Dyna-Float WHEEL BALANCER

C-3480 For all passenger cars and light trucks.

Low-Cost Efficient Model For Small Shops.

Balancer is fast and simple to operate—merely lay wheel over spindle—tapered cone automatically centers it. Add weights to light side until bubble centers in black circle. No need to remove hub and drum assembly or to disturb wheel bearings.

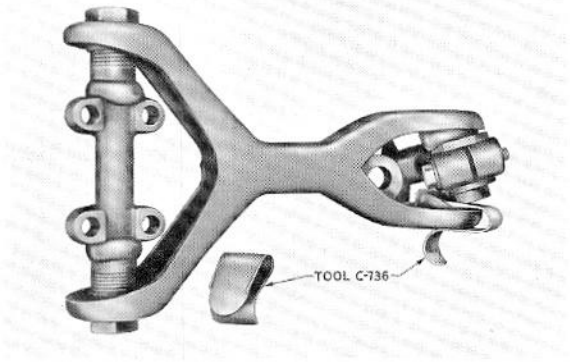


KING PIN BUSHING REMOVING AND INSTALLING TOOL

C-328 For all Plymouth, Dodge, DeSoto and Chrysler Cars.

C-328-A For all Plymouth, Dodge, DeSoto and Chrysler Cars and Dodge Trucks up to 3 Ton Capacity.

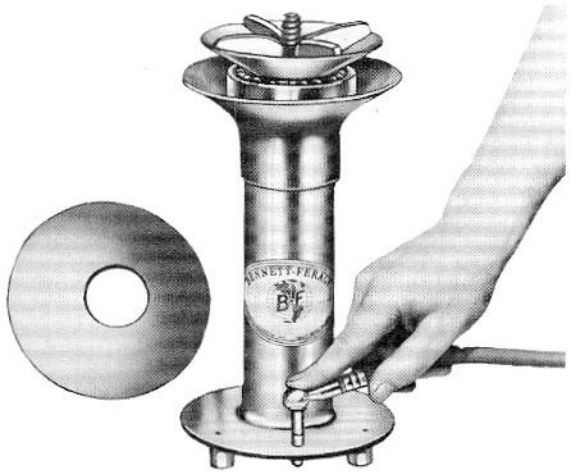
This tool avoids danger of causing damage to the spindle or accidentally burring and swelling new bushings during installation, such as may occur when they are driven in place with a hammer and punch.



UPPER CONTROL ARM SEAL AND BUSHING INSTALLING TOOL

C-736 For 1946 thru 1956 Plymouth, Dodge, DeSoto and Chrysler Cars.

Equip each of your front end mechanics with this low cost tool and be sure that the upper control arm protecting seal is properly re-installed on your customer's car. This tool acts like a shoe horn guiding the arm into position with the rubber seal in place as shown. Same type of tool as used on car factory production line.

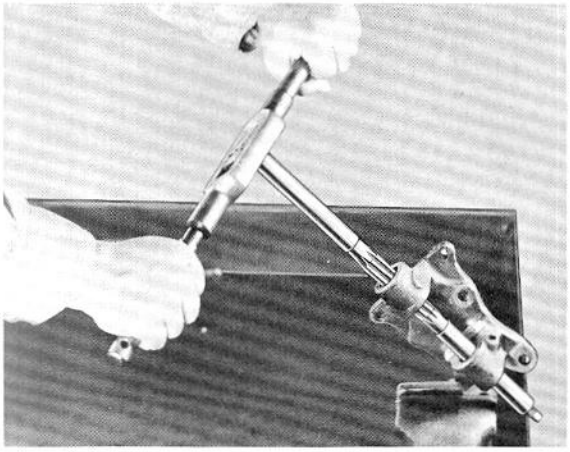


ROLLER AND BALL BEARING PACKERS

C-816 Bearing Capacity 6" dia.

DD-1051 Bearing Capacity 9½" dia.

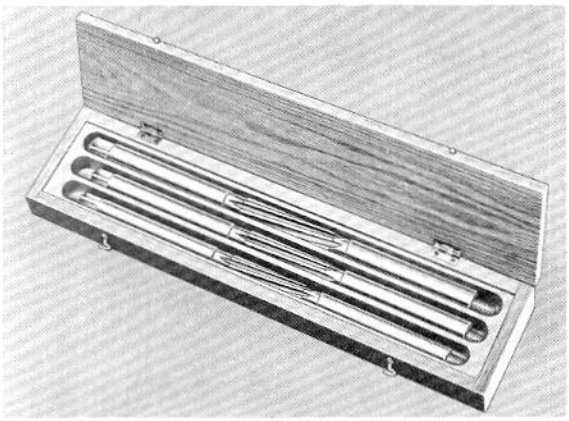
Simplify bearing packing with these time saving tools. No lever grease gun is required—merely fill the lubricant reservoir with fibrous or preferred grease—install bearing and thoroughly lubricate by air pressure as illustrated. Air fitting in base of packers works with standard air hose eliminating waste and mess while speeding up lubrication. Be sure to install one or more in your lubrication and brake service departments. Extra plate is for adapting tool to large bearings.

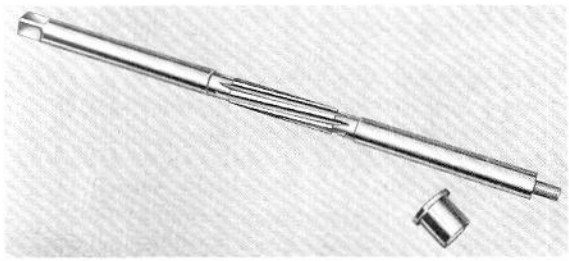


Long Pilots Properly Align Reamers In BOTH Bushings.

These are rugged, modestly priced, spiral flute reamers that can easily be safely expanded from a few thousandths under their nominal size to as much as .010"-.012" oversize. The long pilots accurately align the reamers in both bushings during entire reaming operation. Spiral flutes prevent chattering even in split type bushings.

SEE PAGE 74 FOR ADJUSTABLE, DUAL SPIRAL FLUTE REAMERS WITH REPLACEABLE HIGH SPEED BLADES.





KING PIN BUSHING LINE REAMERS

Spiral Flute Expansion Type

C-369 ***Size. 795".***

For all 1935 thru 1956 Plymouth, Dodge, DeSoto cars. Also 1935 thru 1956 Chrysler Windsor, and 1953 thru 1956 New Yorker Models, and Dodge ½, ¾ and 1 ton trucks, also DU Routevans. Station Wagon and 7 passenger models excepted.

C-379 ***Size .9375".***

For 1935 thru 1952 Chrysler New Yorker models, also all Custom and Crown Imperials. All station wagon and 7 passenger models. Dodge 1½ ton trucks and EU Routevans.

C-58 ***Size 1.000".***

For Dodge 2 ton trucks.

C-600 ***Size 1.125".***

For Dodge 2 and 2½ ton trucks.

C-641 ***Size 1.234".***

For Dodge 2¾ and 3 ton trucks.

HARDENED ALIGNMENT BUSHINGS

C-630 For aligning C-369 Reamers.

C-631 For aligning C-379 Reamers.

For Accurately Reaming Spindles Fitted With One Needle Bearing And One Bushing.

Remove needle bearing and temporarily replace it with one of these special bushings to accurately align reamer when sizing new lower bushing.

KING PIN BUSHING REAMER SET

C-671 For all Plymouth, Dodge, DeSoto and Chrysler Cars, Also Dodge 1½, 2 and 2½ Ton Trucks.

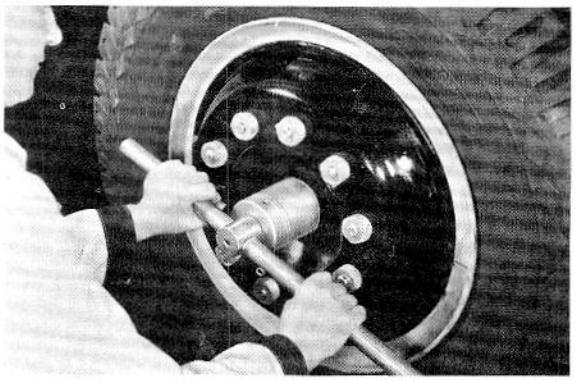
C-697 Hardwood Case only.

Set contains 3 popular sizes of expansion type, king pin bushing line reamers in a hardwood case. Sizes: .795", .9375", and 1.125". The long, precision ground pilots allow accurate line reaming of both the upper and lower bushings. Spiral flutes prevent reamer chatter even when reaming thin rolled bushings. Hardwood case may be ordered separately.

KING PIN BUSHING LINE REAMER AND PILOT BUSHING

C-691 For Plymouth, Dodge, DeSoto and Chrysler Cars (Reamer Size .795")

A hardened precision ground pilot bushing is supplied with this spiral flute, expansion type king pin reamer to allow accurate line reaming of the spindles used in some of these models which were fitted with one bronze bushing and one needle bearing. The needle bearing is removed and temporarily replaced with the hardened pilot bushing to align the reamer. Reamer can be used without pilot bushing on cars using 2 bronze bushings.



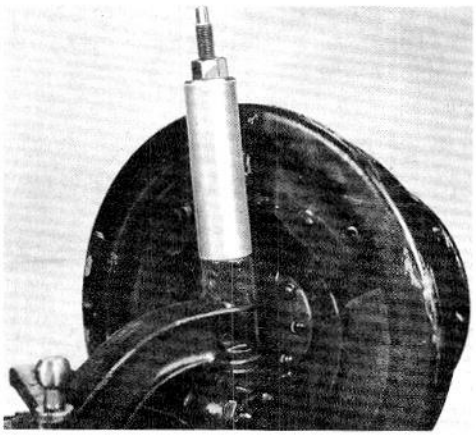
FRONT WHEEL SPINDLE NUT SOCKET WRENCHES

DD-1019 Size 2¼" Hex.—1" square drive.

DD-1020 Size 2⅝" Hex.—1" square drive.

DD-1021 1" square drive Tee handle.

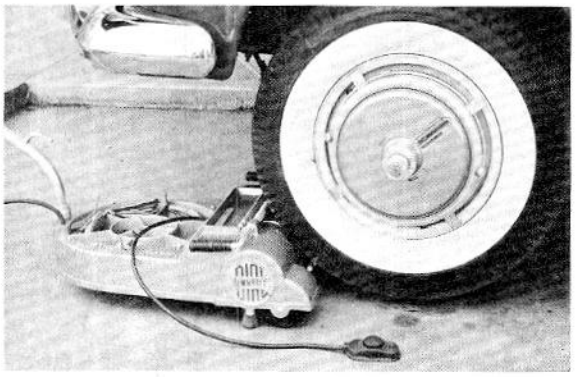
Large forged hexagon broached sockets like these are often difficult to obtain. Order from our complete stocks and have the proper socket when you need it.



KING PIN PULLER

DD-1155 For Dodge 2½, 2¾ and 3 ton Trucks.

Removing old and worn king pins on these heavier trucks is often very difficult, even when this special puller is used. If 125 foot pounds of torque on the screw does not start the pin, strike the axle "I" beam a sharp blow with a light hammer. It may also be necessary to warm the axle slightly to remove a severely frozen pin.



Dial-O-Matic On-The-Car WHEEL SPINNER AND BALANCER

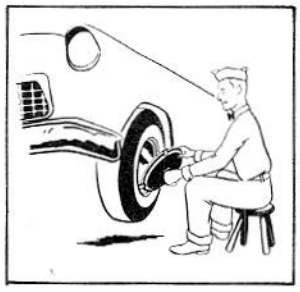
C-3504 Combination wheel spinner and balancer with built-in weight selector tray and handy tote unit.

2 Knob Control Simplifies And Speeds Up All Static And Dynamic Wheel Balancing.

Here's the combination unit that brings new speed, safety, and accuracy to wheel balancing. It fits *all wheels—locks on so it cannot fly off, then indicates location and size of weight needed. Spinner has foot control switch—leaves both hands free for balancing. Complete, self-contained unit is easily wheeled to car for balancing wheels while other needed services are being performed.

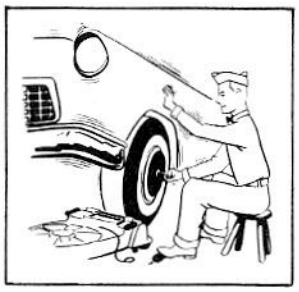
***Can also be used on rear wheels if proper care is used to prevent car slipping off supporting stands.**

DIAL-O-MATIC REDUCES WHEEL BALANCING TO ONLY 4 SIMPLE—POSITIVE STEPS



DIAL-O-MATIC BALANCER IS SELF-CENTERING.

This makes it fast and easy to install. Locks on—cannot fly off. 6 ounce capacity means most wheels can be balanced in single operation.



2 KNOB CONTROL AND FOOT-OPERATED SPINNER IS EASIEST TO USE.

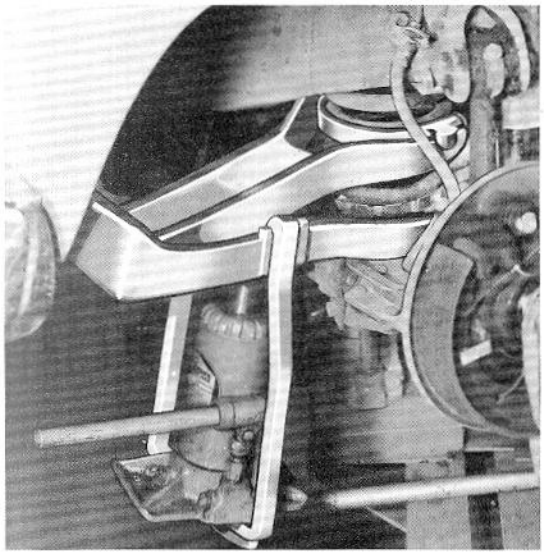
Takes no special skill to operate—anyone can learn to use it successfully in a matter of minutes.

DIAL TELLS LOCATION AND WEIGHT NEEDED.

Large scale makes accurate readings fast—location indicator is close to outer wheel diameter—eliminates transfer error.

ATTACH WEIGHT AND √ BALANCE AT FULL R.P.M.

Foot-operated spinner has heavy-duty 1½ H.P. motor to spin all wheels at full R.P.M.



(Not necessary to remove wheel in actual installation of spring spacer. Wheel was removed in picture above to facilitate photograph.)

FRONT SPRING SPACER INSTALLING TOOL

C-3460 For all Plymouth, Dodge, DeSoto and Chrysler cars and light trucks.

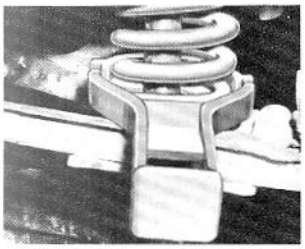
Springs Need Not Be Removed— Installs BOTH Spacers In Only 5 Minutes.

(Takes 1.9 hours without Tool.)

Now, with the help of this simple tool, a sagging front end can be brought back up to normal in only five minutes. Think of how easy it would be to sell an owner this service that would immediately improve the appearance of his car—give him a better ride with easier steering and improved control. It is so simple it can be done while the customer waits. Sell it on a no obligation basis—if your customer doesn't think his car looks better and steers easier, you'll take 'em out and make no charge. You won't lose one sale in ten—try it!

CANTILEVER ACTION SAFELY LIFTS SPRING—NO DANGER OF BENDING ARM

Tool lifts either left or right spring by slipping short extension from one to the other fork of base casting. Broad, husky, base section spreads lifting pressure over wide area of lower control arm. There is no danger of bending arm when this tool is used.

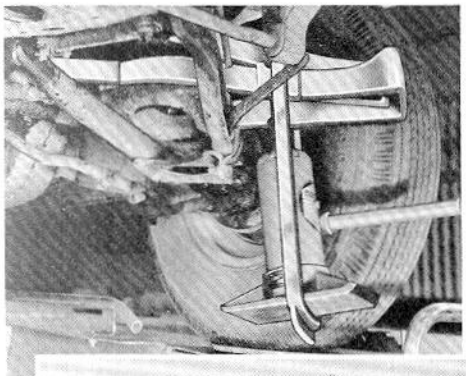


OFFSET PLATE DESIGN FITS SPIRAL OF ALL SPRINGS

The offset designed trunnion plate slips between the coils of the spring and allows a straight-up lift. May be inserted from front or back of spring.

NEW OPEN-THROAT SPRING SEAT SPACERS ARE STANDARD *MOPAR* STOCK ITEMS

Car factory engineers have tested this tool and recommended it to install the new MoPar open-throat type spacers that can be ordered from your regular source of MoPar parts. They slip in so easily that this tool opens up a new source of extra profits to those service departments that will sell this new service to owners who have cars with sagging front ends. Spacers available in two thicknesses—will raise a front end as much as 3".



ANY STANDARD 3 TO 12½ TON HYDRAULIC JACK SUPPLIES POWER

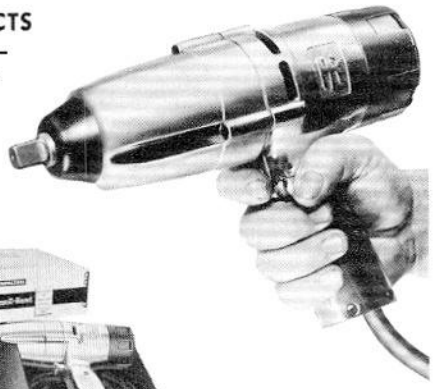
The two main sections of the tool nest together without having to be fastened with any bolts or screws. Jack ram presses against a pressure pad on under side of lift arm which hinges in the fulcrum socket of the forked base section of tool. This provides a safe, straight-up lift to compress springs on all* cars.

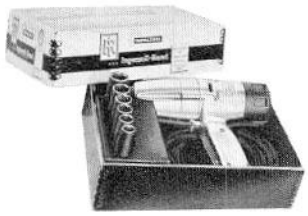
(*A special F-1A trunnion plate is required for Pontiac cars.)

TOOL IS RUGGED—MADE OF ALLOY STEEL CASTINGS TO PROVIDE LONG LIFE

This is a safe, dependable, heavy-duty tool designed and perfected in actual service use by a nationally recognized, practical front end engineer and alignment shop operator.

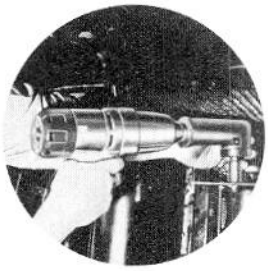
1900 IMPACTS Per Minute— Forward Or Reverse!





Buy Wrench With Or Without Sockets

Metal Edged Carton Is Standard Packaging—Has Room For 6 Sockets.

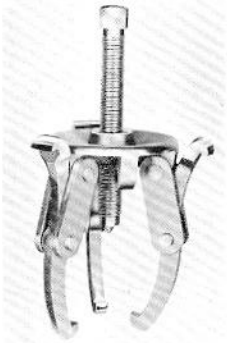


Right Angle Drive Attachment Reaches Difficult Spots Easily.

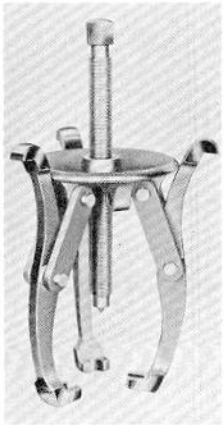
Deluxe Metal Cases Available As Extra—Specify Wrench Size.

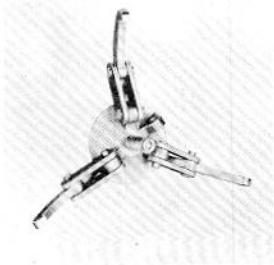
Side And End Views Of Puller Fitted With 2 Arms.

Extra Set Long Arms Increases Range To 8" Spread x 5½" Depth.



Puller With Short Arms. 0" To 3½" Spread x 3½" Depth.





All Arms Double Ended. Short Arms Have One End Slotted.

ELECTRIC IMPACT WRENCHES

MT-376 Popular priced, ½" square drive, Model 4U-SD —ample power for most all passenger car service.

MT-281 Heavy-Duty, ½" square drive, Model 5-U—has 25% extra power.

MT-282 Heavy-Duty, ⅝" square drive, Model 8-U—for truck service.

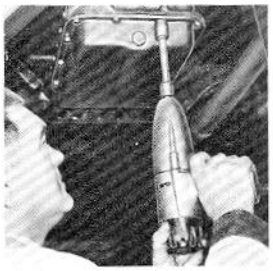
Above numbers cover wrenches only—order attachments separately.

Essential For All Competitive Shops For Changing Wheels—Oil Pans—Cylinder Heads, Etc.

Fast, powerful impacts take the drudgery and effort out of hundreds of everyday service jobs. Save as much as 1.8 hours on a piston ring job and up to 1.5 hours on a transmission overhaul.

As Convenient As Plugging In A Light.

No air lines to hook up—no heavy hose lines to tug—just plug one of these lightweight wrenches in along with your shop light. The ½" sizes weigh only about 6 lbs. and are just over 10" long. Available in 110 and 220 volt, A.C. and D.C. models, all underwriter lab. approved.



Use Only With Special Impact Type Sockets.

Do not use these powerful tools with ordinary sockets—it will void their guarantee. Impact type sockets, right angle drives, and collet attachments, available—order by size and specify size of impact wrench.

2 AND 3 ARM UNIVERSAL PULLER

PO-11 Small puller with set of 3 short arms.

PO-11L Small Puller with set of 3 long arms.

PO-11L-5 Set of 3 long arms only.

Self-Locking Link Pins Can Be Quickly Changed Without Using A Wrench.

For all those odd pulling jobs that do not justify a special tool, you'll find this alloy steel puller very well suited. Has shear pins to guard against jaw breakage.

LARGE CONVERTIBLE PULLER

PO-12 Large Puller with set of 3 short arms.

PO-12L Large Puller with set of 3 long arms.

PO-12L-5 Set of 3 long arms only.

Can Be Used As 2 Or 3 Arm Puller. Available With Long Or Short Arms.

This puller is similar to the PO-11 but with greater capacity. Short arms reach up to 5½" with 0" to 8" spread. Long arms reach up to 8½" with 0" to 10" spread. Slotted end of arms are ideal for attaching puller with cap screws.

WHEN IT'S BONNEY — IT'S THE BEST

To mechanics who know good tools, "Bonney" and "Best" are synonymous. Every Bonney tool is guaranteed and is backed by over 50 years of manufacturing "Know-How".

Bonney was the first to make tough, durable, heat treated alloy steel tools—Bonney was also first to give mechanic's tools, today's fine chrome finish. You'll always be first when you buy Bonney—for they'll always be first choice for Lightness, Strength, Balance and Precision.

Bonney also makes an economy line of guaranteed precision tools for apprentice mechanics, hobbyists, farmers and home owners. This lower-priced line of mechanic's hand tools is known as "Bon-E-Con", the Bonney economy line. See page 99 for ½" Socket Set—write for details on other sizes.

Individual Tools In All Sets Available Separately

V-51-B Set 17 Pieces in Metal Box

V-51 Set 17 Pieces in Cardboard Carton

EXTRA SMALL SOCKET SET

1/4" Square Drive—17 Pieces

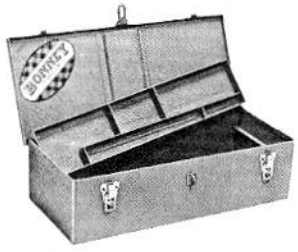
Ideal For Servicing Carburetors—Distributors Generators—Radios, Etc.

CONTAINS:

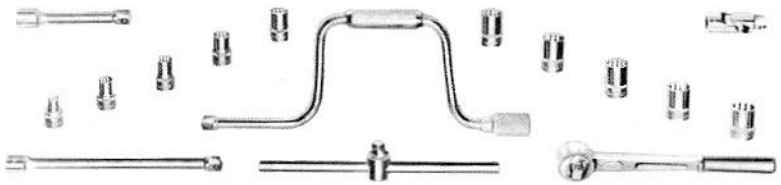
No.	Description	No.	Description
V6	5/16" Hexagon Socket	VS10	5/16" Double Square Socket
V7	11/32" Hexagon Socket	VS12	3/8" Double Square Socket
V8	1/4" Hexagon Socket	V730	Sliding "T" Handle 4½" long
V9	9/32" Hexagon Socket	V606	Extension, 6" long
V10	5/16" Hexagon Socket	V602	Extension, 2" long
V11	11/32" Hexagon Socket	V780	Screw Driver Handle, non-conductor type, 6" long
V12	3/8" Hexagon Socket	V720	Hinge Handle, 5¾" long
V14	7/16" Hexagon Socket	V775	Cross Handle, 3½" long for V720
VS8	1/4" Double Square Socket		

TD-4-B
Set 39 Pieces In Metal Case

TD-4
Set 39 Pieces In Carton



This set supplies the mechanic with a general purpose selection of sockets and attachments for automobile, aircraft, refrigeration and household repair work.



CONTAINS:

No.	Description	No.	Description
A14	7/16" Double Hexagon Socket	A26	13/16" Double Hexagon Socket
A16	½" Double Hexagon Socket	A28	7/8" Double Hexagon Socket
A18	9/16" Double Hexagon Socket	A740	Speeder, 14½" long
A19	13/32" Double Hexagon Socket	A730	Sliding "T" Handle, 11" long
A20	5/8" Double Hexagon Socket	A605	Extension, 5" long
A22	11/16" Double Hexagon Socket	A610	Extension, 10" long
A24	¾" Double Hexagon Socket	A760	Universal Joint
A25	25/32" Double Hexagon Socket	A704	Reversible Ratchet, 10" long

SMALL SERIES SOCKET SET

3/8" Square Drive—39 Pieces

Combines Small Size With Unusual Strength

CONTAINS:

No.	Description	No.	Description
T760	Universal Joint	TS20	1/8" Dbl. Sq. Soc., 1½"
T606	Extension, 6"	TU14	7/16" Flex. Dbl. Hex. Soc.
T612	Extension, 12"	TU16	½" Flex. Dbl. Hex. Soc.
T617	Extension, 17"	TU18	9/16" Flex. Dbl. Hex. Soc.
T742	Speeder, 17¼"	TU20	5/8" Flex. Dbl. Hex. Soc.
T10	5/16" Dbl. Hex. Socket	LT14	7/16" Ex. Dp. Dbl. Hex. Soc.
T12	3/8" Dbl. Hex. Socket	LT16	½" Ex. Dp. Dbl. Hex. Soc.
T14	7/16" Dbl. Hex. Socket	LT18	9/16" Ex. Dp. Dbl. Hex. Soc.
T16	½" Dbl. Hex. Socket	LT20	5/8" Ex. Dp. Dbl. Hex. Soc.
T18	9/16" Dbl. Hex. Socket	LT22	11/16" Ex. Dp. Dbl. Hex. Soc.
T19	19/32" Dbl. Hex. Socket	LT24	¾" Ex. Dp. Dbl. Hex. Soc.
T20	5/8" Dbl. Hex. Socket	LT26	13/16" Ex. Dp. Dbl. Hex. Soc.
T22	11/16" Dbl. Hex. Socket	LT28	7/8" Ex. Dp. Dbl. Hex. Soc.
T24	¾" Dbl. Hex. Socket	T27	Drag Link Socket
T25	25/32" Dbl. Hex. Socket	T720	Hinge Handle, 7⅝" long
T26	13/16" Dbl. Hex. Socket	T603	Extension, 3" long
T128	7/8" Dbl. Hex. Socket	T775	Cross Handle, 6" long
TS14	7/16" Dbl. Sq. Soc., 1½"	T704	Rev. Ratchet, 6½" long
TS16	½" Dbl. Sq. Soc., 1½"	T730	Sliding "T" Hdle, 8" long
TS18	9/16" Dbl. Sq. Soc., 1½"		

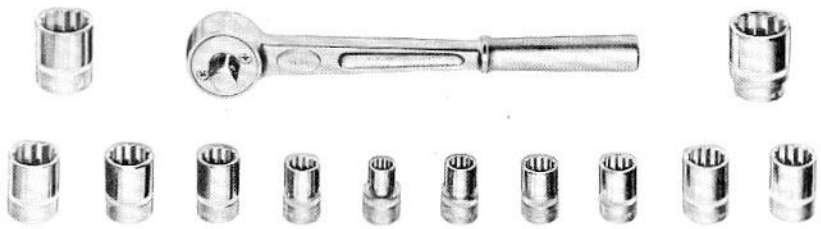
STANDARD SERIES SOCKET SET

1/2" Square Drive—16 Pieces

Professional Mechanic's Favorite—Fully Guaranteed

AA-24-B Set 16 Pieces in Metal Case

AA-24 Set 16 Pieces in Cardboard Carton



STANDARD SERIES SOCKET SET

1/2" Square Drive—13 Pieces

AA-16-B Set 13 Pieces In Metal Case

AA-16 Set 13 Pieces In Cardboard Carton

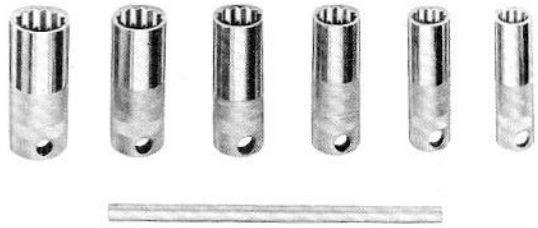
Contains "MOST USEFUL" Sockets and 10" Ratchet

No.	Description	No.	Description
A14	7/16" Double Hexagon Socket	A25	25/32" Double Hexagon Socket
A16	1/2" Double Hexagon Socket	A26	13/16" Double Hexagon Socket
A18	9/16" Double Hexagon Socket	A28	7/8" Double Hexagon Socket
A19	19/32" Double Hexagon Socket	A30	15/16" Double Hexagon Socket
A20	5/8" Double Hexagon Socket	A32	1" Double Hexagon Socket
A22	11/16" Double Hexagon Socket	A704	Reversible Ratchet, 10" long
A24	3/4" Double Hexagon Socket		

SPARK PLUG SOCKET SET

1/2" Square Drive—7 Pieces

Special Deep Sockets Prevent Damage To Spark Plugs



LD2B Set in Metal Box **LD2** Set in Cardboard Box

No.	Opening	Length	Diameter
LD20	5/8"	3 1/4"	7/8"
LD22	11/16"	3 1/4"	15/16"
LD26T	13/16"	3 1/4"	1 1/16"
LD28T	7/8"	3 1/4"	1 3/64"
LD30	15/16"	3 1/4"	1 1/4"
LD32	1"	3 1/4"	1 11/32"
A775	Cross Handle, 8" long		

HEAVY DUTY SOCKET SET AND ATTACHMENTS

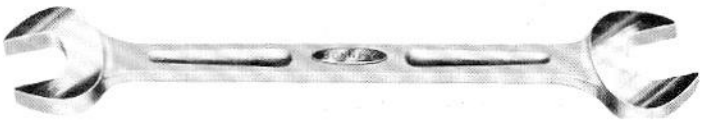
3/4" Square Drive—20 Pieces

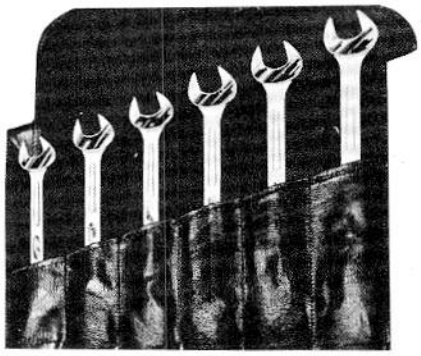
HD-1-B Set 20 Pieces In Metal Case

HD-1 Set 20 Pieces In Cardboard Carton

For Servicing Trucks—Buses—Tractors—Marine Engines—Industrial, Etc.

No.	Description	No.	Description	No.	Description
R30	15/16" Double Hexagon Socket	R48	1 1/2" Double Hexagon Socket	R730	Sliding "T" Handle, 20" long
R32	1" Double Hexagon Socket	R52	1 5/8" Double Hexagon Socket	R720	Hinge Handle, 22" long
R34	1 1/16" Double Hexagon Socket	R54	1 11/16" Double Hexagon Socket	R775	Cross Handle, 16 1/2" for R720
R36	1 1/8" Double Hexagon Socket	R58	1 13/16" Double Hexagon Socket	R609	Extension, 8 1/2" long
R40	1 1/4" Double Hexagon Socket	R60	1 7/8" Double Hexagon Socket	R604	Extension, 4" long
R42	1 5/16" Double Hexagon Socket	R64	2" Double Hexagon Socket	R617	Extension, 16 1/2" long
R46	1 7/16" Double Hexagon Socket	R704	Reversible Ratchet, 20" long		





Heat-treated Alloy Steel Construction Gives Years And Years Of Service

LIGHTWEIGHT—STREAMLINED END WRENCHES

Pear-Shaped Thin Heads Reach Into Hard-To-Get-At Places

Special care has been taken to make handles round and smooth. No sharp edges or rough spots to make hands tired and sore.

Set 6 Wrenches

Covers most useful openings from 5/16" to 1". N46R is in leatherette roll; N46 in cardboard.

No.	Size Openings	No.	Size Openings
E1012	5/16" & 3/8"	E2224	11/16" & 3/4"
E1416	7/16" & 1/2"	E2628	13/16" & 7/8"
E1820	9/16" & 5/8"	E3032	15/16" & 1"

Set 6 Wrenches

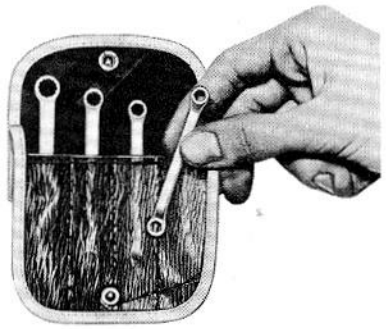
Includes all standard openings from 3/8" to 15/16". N47R is in leatherette roll; N47 in cardboard.

No.	Size Openings	No.	Size Openings
E1214	3/8" & 7/16"	E1925	19/32" & 25/32"
E1618	1/2" & 9/16"	E2426	3/4" & 11/16"
E2022	5/8" & 11/16"	E2830	13/16" & 15/16"

N-96 SET—6 Pieces

Designed for work in locations with low overhead clearance. Two short, four long type wrenches. N96R is in leatherette roll; N96 in cardboard carton.

No.	Openings	Length	No.	Openings	Length
2886	3/8" & 7/16"	4½"	2891	½" & 9/16"	8⅝"
2888	½" & 9/16"	5½"	2892	⅝" & 11/16"	9⅝"
2890	3/8" & 7/16"	7⅝"	2893	¾" & 13/16"	11"



N-84 SET—3 Pieces

Contains three short type double offset box wrenches. N84R is in leatherette roll; N84 in cardboard box.

No.	Opening	No.	Opening	No.	Opening
2804	3/8" & 7/16"	2805	½" & 9/16"	2806C	⅝" & 11/16"

15° ANGLE BOX WRENCHES

Available In Short And Long Types— All Are Double Hexagon Broached

N-99 SET—6 Pieces

Contains six popular long-type wrenches. N99 is available in cardboard box only.

No.	Openings	Length	No.	Openings	Length
2890	3/8" & 7/16"	7⅝"	2893	¾" & 13/16"	11"
2891	½" & 9/16"	8⅝"	2894	⅞" & 15/16"	13¼"
2892	⅝" & 11/16"	9⅝"	2895C	1" & 1⅛"	15½"

DOUBLE OFFSET BOX WRENCHES

Drop-forged, Light Weight—Thin— Wall Design Is Ideal For Ignition— Carburetor—Radio, Etc. Service

N-92 SET—5 Pieces

Contains five long, double offset box wrenches in most popular openings from 3/8" to 15/16". N92 is available in cardboard box only.

No.	Size Openings	No.	Size Openings
2804L	3/8" & 7/16"	2808F	¾" & 13/16"
2805L	½" & 9/16"	2809	⅞" & 15/16"
2807A	⅝" & 11/16"		

N-80 SET—4 Pieces

Contains four extra-small double offset box wrenches for work in places where space is limited. N80R is in leatherette roll; N80 in cardboard box.

No.	Size Openings	Length	No.	Size Openings	Length
E40	3/16" & 13/64" Hexagon	2⅛"	E44	¼" & 9/32" Dbl. Hex.	3⅛"
E42	7/32" & 15/64" Hexagon	3⅛"	E46	5/16" & 11/32" Dbl. Hex.	3¼"

COMBINATION OPEN-END AND BOX WRENCHES

These 2 in 1 Wrenches Are Essential For All Time-Saving Mechanics

N-68 SET—8 Pieces

Contains eight wrenches in most popular openings from 3/8" to 7/8". N68R is in leatherette roll; N68 in cardboard box.

No.	Opening	No.	Opening	No.	Opening
1160	3/8"	1163	9/16"	1166	¾"
1161	7/16"	1164	⅝"	1167	⅞"
1162	½"	1165	11/16"		

N-56 SET—5 Pieces

Contains five wrenches in most popular openings from 7/16" to 11/16". N56R is in leatherette roll; N56 in cardboard box.

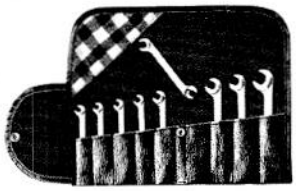
No.	Opening	No.	Opening	No.	Opening
1161	7/16"	1163	9/16"	1165	11/16"
1162	½"	1164	⅝"		

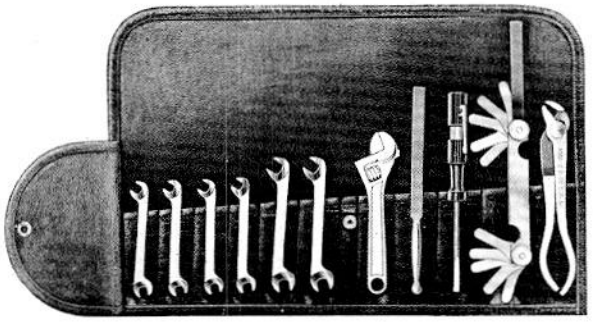
B-20 7" BATTERY PLIERS

The jaws of this plier are deeply serrated to insure a strong grip on the terminal connections of a battery.

15°
Double End

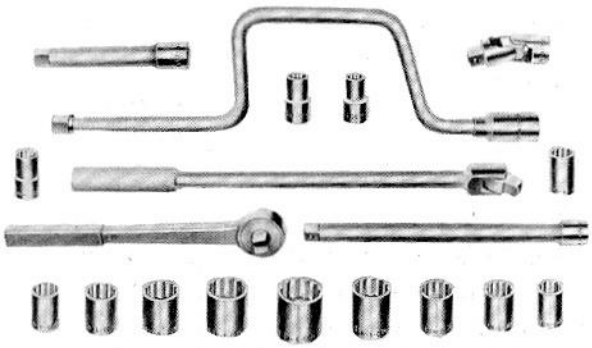
15° and 60°
Double
End





Available In 6 Different Combinations Of Popular Sizes.

No.	Openings	Head Thickness	No.	Openings	Head Thickness
420-A	7/16" & ½"	5/32"	425	¾" & 13/16"	7/32"
422	½" & 9/16"	5/32"	426	¾" & ⅞"	7/32"
424	⅝" & 11/16"	3/16"	428	15/16" & 1"	7/32"



BON-E-CON Also Available In ⅜" and ¾" Square Drive Sets. Also End and Box Wrenches Plus Combination Wrenches. Write For Details

BONNEY MINIATURE WRENCH SETS

Made of Heat-Treated, Drop Forged Alloy Steel With Accurately Milled Openings

N-20 SET—5 Pieces—10 Sizes

Each end of five wrenches in this set is a different size opening ranging from 3/16" to 15/32". N20R is in leatherette roll; N20 in cardboard box.

No.	Openings	No.	Openings	No.	Openings
H10	3/16" & 7/32"	H14	5/16" & 11/32"	H18	13/32" & 15/32"
H12	¼" & 9/32"	H16	⅜" & 7/16"		

N-24 SET—9 Pieces—9 Sizes

Nine wrenches in this set give ideal coverage for adjustments on generators, distributors, air cleaners and electrical parts generally. N24R is in leatherette roll; N24 in cardboard box.

No.	Size Openings	No.	Size Openings	No.	Size Openings
E14	13/64" & 15/64"	E20	¼" & 5/32"	E26	11/32" & 3/8"
E16	15/64" & 13/64"	E22	9/32" & 5/16"	E28	3/8" & 11/32"
E18	7/32" & ¼"	E24	5/16" & 9/32"	E30	7/16" & ½"

N-11R IGNITION TOOL SET

Contains All Essential Tools For Most Every Ignition Service

Every automobile mechanic needs this set of Bonney ignition wrenches. It includes the six popular sizes of small open-end ignition wrenches as well as other specialized tools for ignition service. Available in leatherette roll only.

No.	Size Openings 15° End	60° End	Length	Thickness of Head	No.	Size Openings 15° End	60° End	Length	Thickness of Head
E14	13/64"	15/64"	3"	7/64"	E20	¼"	7/32"	3"	7/64"
E16	15/64"	13/64"	3"	7/64"	E22	9/32"	5/16"	3½"	⅛"
E18	7/32"	¼"	3"	7/64"	E24	5/16"	9/32"	3½"	⅛"

BW4 4" Adjustable Wrench
5⅓" Point File
E02 Neon Screw Driver
K52 Feeler Gauge
B35 Ignition Plier

DOUBLE END TAPPET WRENCHES

15° Offset Openings Make Them Easy To Use In Sets Of Two And Three Wrenches.

The precision milled openings of these drop forged, heat treated, alloy wrenches snugly fit their particular size of tappet nut or screw. They have just the right "feel" so essential to fast-operating professional mechanics. Each wrench is 9½" long.

BON-E-CON SOCKET WRENCH SET

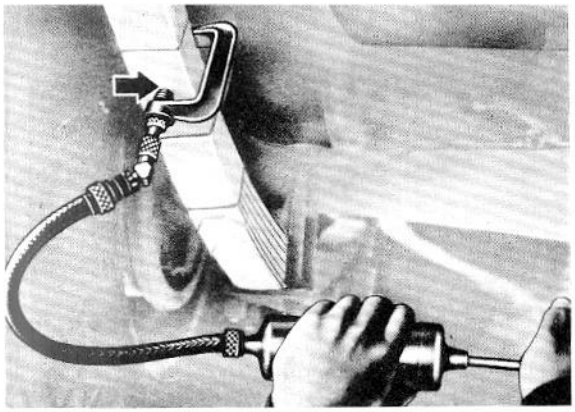
Bonney's Economy Set Of Guaranteed Wrenches For Hobbyists—Home Mechanics, Etc.

Some of the many uses to which this set can be put indoors and out include work on lawn mowers, garden tractors, children's vehicles, water pumps, washing machines, heater, etc.

Z-245B SET—19 Pieces **1/2" Square Drive**

CONTAINS:

No.	Description	No.	Description
ZA605	5" Extension	ZA22	11/16" Double Hexagon Socket
ZA610	10" Extension	ZA24	¾" Double Hexagon Socket
ZA700	10" Reversible Ratchet	ZA26	13/16" Double Hexagon Socket
ZA722	15" Hinge Handle	ZA28	⅞" Double Hexagon Socket
ZA744	16" Speeder	ZA30	15/16" Double Hexagon Socket
ZA760	Universal Joint	ZA32	1" Double Hexagon Socket
ZA14	7/16" Double Hexagon Socket	ZA34	1 1/16" Double Hexagon Socket
ZA16	½" Double Hexagon Socket	ZA36	1⅛" Double Hexagon Socket
ZA18	9/16" Double Hexagon Socket	ZA40	1¼" Double Hexagon Socket
ZA20	⅝" Double Hexagon Socket	ZMB54	Metal Box 19" x 6½" x 6¾"

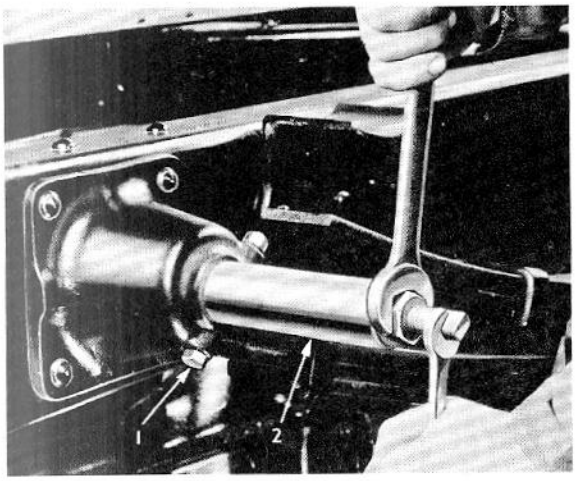


SPRING COVER LUBRICATING TOOL

C-408 For all Springs with Metal covers.

Can Be Used With Hand Or Power Operated Guns.

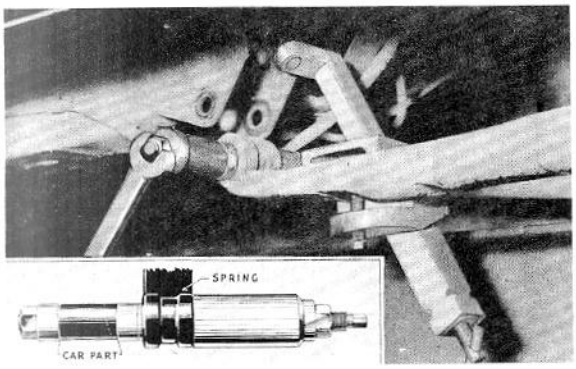
Springs equipped with metal covers need specialized lubrication—follow your car factory's instructions—use this special tool and the recommended lubricant. Special sharp plunger of tool pierces inner cloth cover and allows lubricant to directly contact spring.
Standard angle Alemite fitting and 50 plugs for sealing lubricating openings in covers, supplied with each clamp. All parts for tool and additional plugs for lubrication openings available separately.



REAR SPRING, FRONT SHACKLE BOLT PULLER

DD-431 For all Dodge 1½ ton trucks.

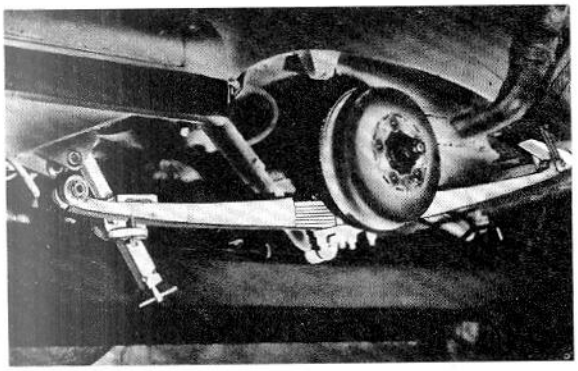
The front shackle bolt on the rear spring of these trucks is usually pressed into a "blind" hole in the spring hanger casting. This makes it impossible to drive the shackle pin from position as can be done on most other models.
Use of this tool, however, makes changing one of the shackles simple and easy. Puller screw fits lubrication fitting tapped hole in end of shackle pin. Be sure and jack weight of body off spring before attempting to pull shackle pin.



SPRING HINGE BOLT RUBBER BUSHING REMOVING AND INSTALLING TOOL

C-3396 For all 1940 thru 1956 Plymouth, Dodge, DeSoto and Chrysler cars.

Replacement of the "Silent Bloc" rubber bushings in the spring is made a fast routine job when this tool is used. Proper size adapters fit behind each size of steel backed rubber bushings protecting the new parts as they are drawn into proper position. A ball thrust bearing under the large pressure nut reduces pulling effort to a minimum. Usually a new bushing can be drawn in place at the same time an old bushing is removed. Use new bushing next to old one with adapter in between to push old bushing from position. Be sure to oil puller screw threads liberally before using puller. Puller will then work easier and last longer.



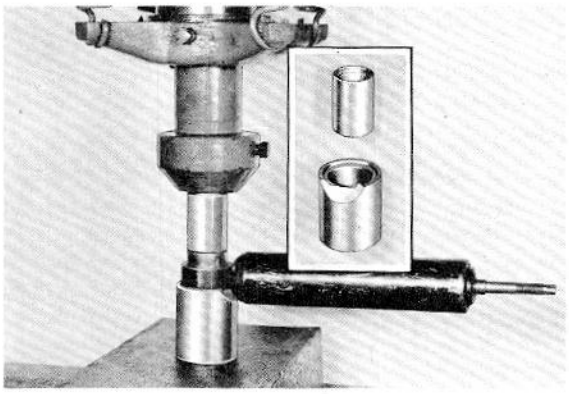
Block spring shackle with hardwood wedge, as illustrated, when removing spring hinge bolts.

SPRING JACK

C-3079 For all passenger cars.

Eliminates Need Of Tying Up Hoist When Changing Shackle Pins And Bushings.

Save time and effort changing all types of spring shackle bolts by using this rugged tool to safely hold the spring in position as shown. Wooden block supplied with tool prevents spring from moving backwards as front of spring is jacked into position to remove and replace spring hinge bolt and bushings. Saves time and labor usually necessary to remove spring from car.



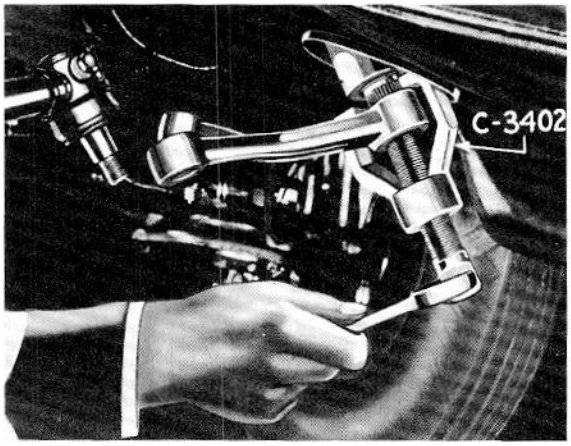
SHOCK ABSORBER LOWER MOUNT ASSEMBLY REMOVER AND INSTALLER

C-3413 For all 1955 and 1956 Plymouth, Dodge, DeSoto and Chrysler cars.

Safely and Quickly Services Steel Jacketed Rubber Bushing In Shock Absorber Eye.

Through the use of this inexpensive, two-piece tool, the shock absorber mounting bushing can be replaced in any arbor press. Larger part of tool safely supports shock absorber eye, while smaller part of tool presses on the steel sleeve of bushing avoiding damage to the bonded section of the mount.

STANDARD STEERING

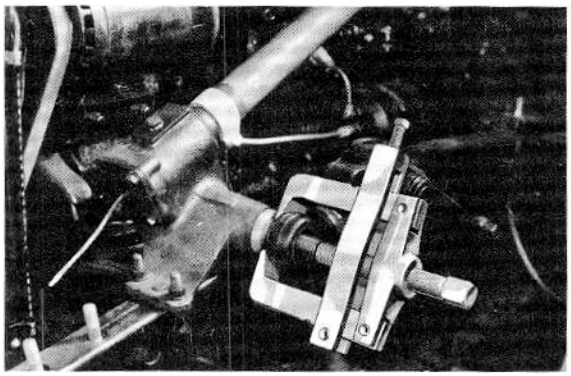


STEERING ARM PULLER

C-3402 "U" Type. For most all cars.

SP-2623 Special Short Screw — To adapt C-143 Pullers to service 1955 and 1956 cars equipped with Power Steering.

Driving the steering arm off the sector shaft with a hammer and punch often causes avoidable damage to the steering gear housing and bearings. This special cast steel puller not only avoids the need of risking such damage but saves time and effort while removing many different types of steering arms.

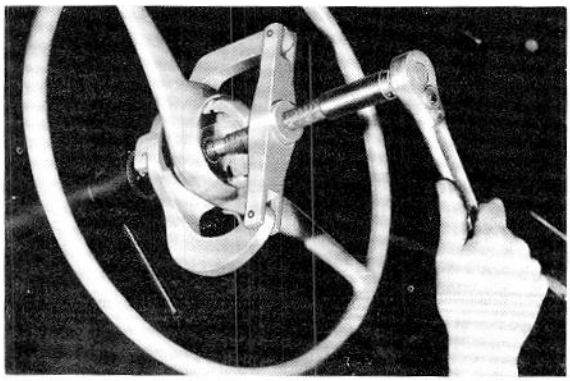


STEERING ARM PULLER

C-410 Heavy Duty Type For Trucks.

Also Pulls Full Yoke Type Universal Joint

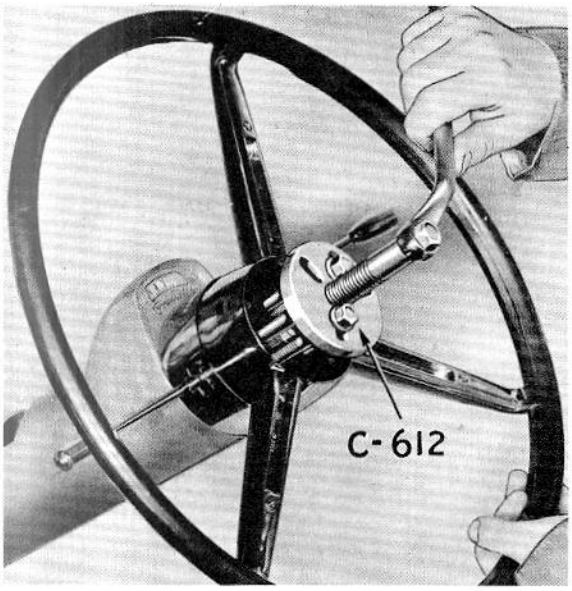
Most trucks and some of the larger passenger cars have steering arms too large to be accommodated with the cast "U" Type Puller. This larger heavy-duty puller will safely and quickly remove these larger arms.
The heat-treated alloy steel puller jaws are tapered so that they may be forced behind a "shouldered" arm with the fast-acting screw-type clamp. This puller has a wide range of adjustments making it ideal for many other specialized heavy-duty jobs.



STEERING WHEEL PULLER

C-232 For Dodge Trucks.

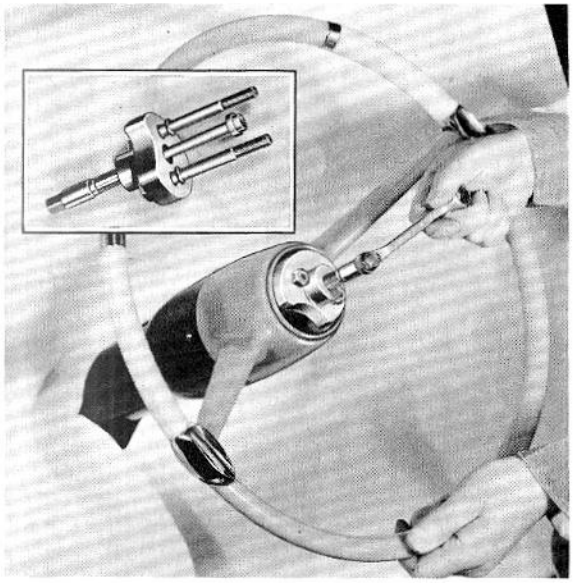
Some passenger car steering wheels and most all truck steering wheels do not have tapped holes in the hub to accommodate a special puller. The puller illustrated at the left, however, will remove these wheels safely and easily. The interlocking jaws fit both four, three and two spoke wheels. Puller is supplied complete with leather protector cup and four steering column adapter buttons.



STEERING WHEEL PULLER

C-612 For all 1939 thru 1956 Plymouth and Dodge cars, also 1939 thru 1954 DeSoto and Chrysler cars.

Many essential service operations on Power Steering Units require removal of the steering wheel. This special puller safely attaches to a considerable variety of different models and designs of steering wheels, making it easy to pull many different wheels with one tool. When this puller is used, there is no danger of marking or damaging the beautiful finish of the steering wheel as can happen when the wheel is driven off with a block of wood.

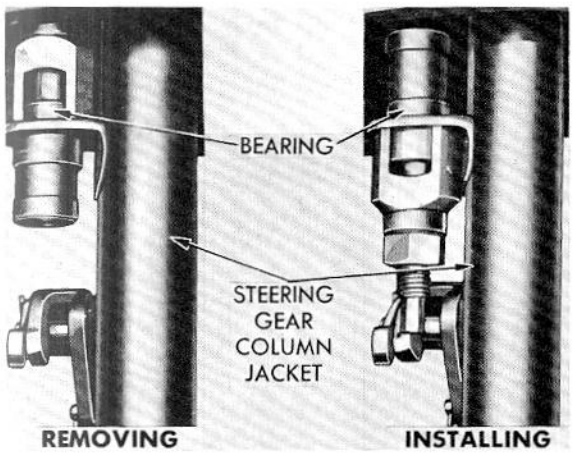


STEERING WHEEL PULLER

C-3428 For 1955 and 1956 DeSoto and Chrysler cars.

Wide "Scoop" In Puller Hub Makes It Easy To Align And Install Attaching Screws In Wheel.

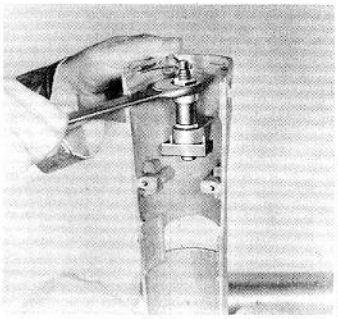
The steering wheels on these cars have a deeper hub section and internal interferences that require this special puller. Rubber grommets retain the attaching screws in the puller body and prevent their being accidentally lost.



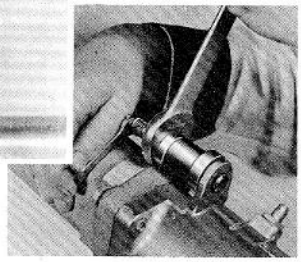
STEERING GEAR REMOTE CONTROL GEAR SHIFT ROD SUPPORT BEARING REMOVER AND REPLACER

C-852 For all 1946 thru 1955 Plymouth and Dodge cars **without** PowerFlite, also all 1946 thru 1953 DeSoto and Chrysler cars.

Quiet, easy gear shifting depends to a large degree on the condition of the gear shift rod support bearing. This tool makes it easy to quickly replace either the Oilite or fabric type bearing without any danger of misaligning or breaking the bearing support bracket from the steering column. Driving these bushings in or out of position often breaks the weld between the bushing bracket and the steering column. Pulling these bushings in and out with this tool puts no strain on the bracket and, therefore, avoids this unnecessary damage.



C-3398 Replacing Upper Bushing In Steering Column Jacket.



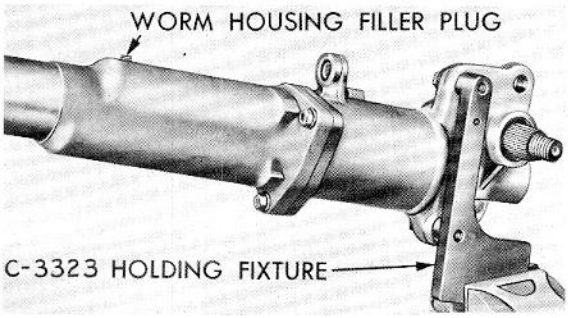
C-3398 Replacing Lower Bushing.

GEARSHIFT ROD BUSHINGS INSTALLER AND REMOVER

C-3398 For all 1954 DeSoto and Chrysler cars, also 1955 DeSoto and Chrysler cars with standard transmissions.

Avoids Accidental Damage To Housing.

Both bushings can be safely drawn in or out with this simple, easy-to-use tool. A special angle-machined adapter with two small locating pins properly aligns tool on unmachined surface of bracket in steering column jacket.

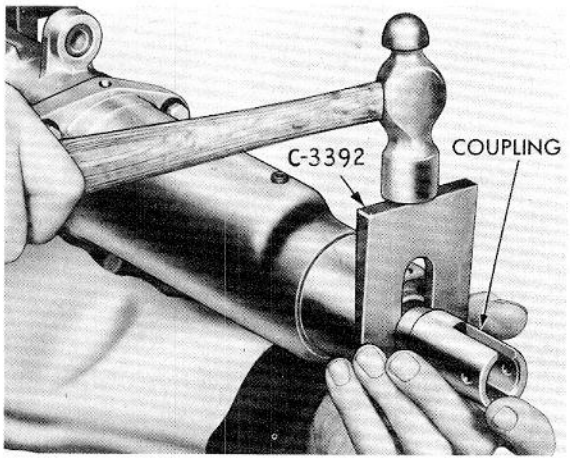


GEAR BODY HOLDING BRACKET

C-3323 For all 1954, 1955 and 1956 DeSoto and Chrysler cars, also 1955 and 1956 Plymouth and Dodge cars equipped with Power Steering.

Provides Safe Convenient Method to Hold Gear In Ordinary Vise.

All tear-down, assembly and test operations can be accurately performed more quickly if the gear is firmly held in this special bracket, than if it must be insecurely held through some makeshift method.

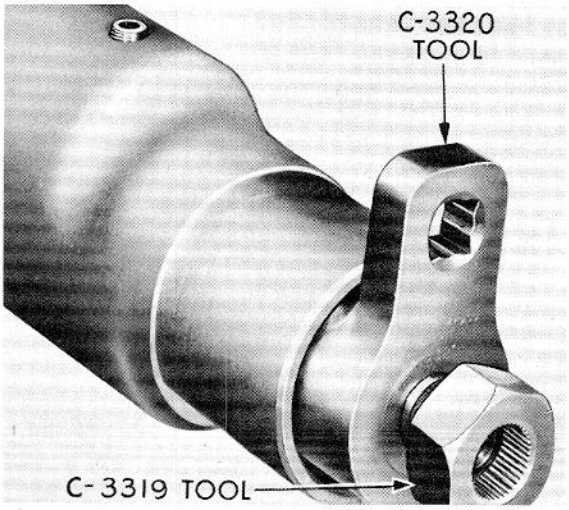


STEERING SHAFT COUPLING REMOVING WEDGE

C-3392 For all 1954, 1955 and 1956 DeSoto and Chrysler cars, also 1955 and 1956 Plymouth and Dodge car equipped with Power Steering.

For Removing Coupling Without Damaging Aluminum Housing.

A light tap on the head of this special hardened wedge safely "pops" the steering shaft coupling free. There is no danger of damaging the upper housing, such as can be caused by attempting to use a screw driver for this operation.

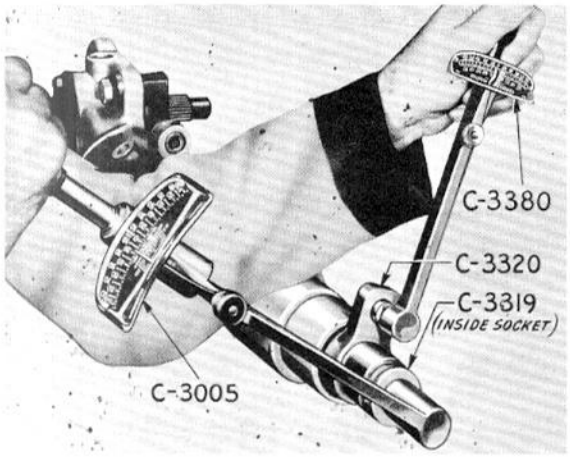


SPECIAL SPLINED NUT FOR HOLDING WORM SHAFT

C-3319 For all 1954, 1955 and 1956 DeSoto and Chrysler cars, also 1955 and 1956 Plymouth and Dodge cars equipped with Power Steering.

Essential For Safely Holding Shaft While Adjusting and Torquing Worm Shaft Bearings.

Several important service and test operations require safe holding or turning of the worm shaft. This special splined nut will, therefore, be found a sound and worthwhile investment to safely protect the fine splines on the end of the worm shaft.



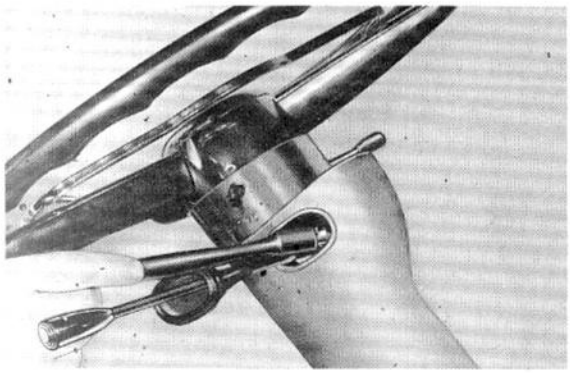
WORM SHAFT BEARING ADJUSTING NUT WRENCH

C-3320 For all 1954, 1955 and 1956 DeSoto and Chrysler cars, also 1955 and 1956 Plymouth and Dodge cars with Power Steering.

The unique design of this wrench allows it to engage the slots of the worm shaft bearing adjusting nut, and simultaneously provide an accurate means of checking its tightness. This assures proper bearing preload, while the worm shaft is held stationary with the C-3319 Splined Nut.

PowerFlite Band Adjusting Wrench C-3380 Is Ideal For This Power Steering Adjustment.

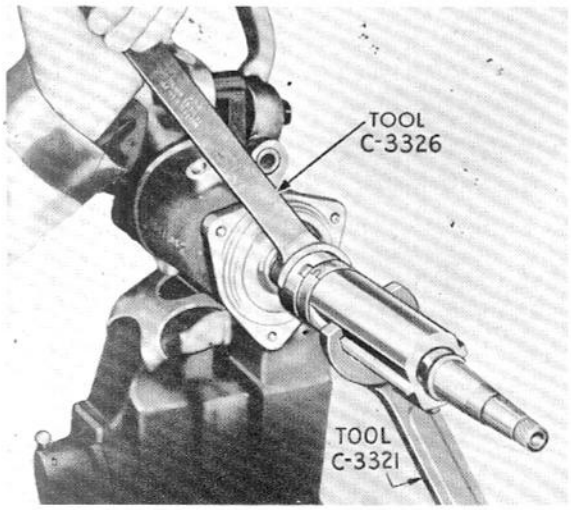
C-3380 PowerFlite Band Adjusting Wrench performs dual service by also being adaptable to measure the proper tightness of the worm shaft bearing adjusting nut. C-3005 is 100 ft.-lb. Sensory Type Torque Wrench being used here to measure proper bearing preload. It is also used for many other important service operations such as accurately tightening cylinder head nuts, etc.



GEAR SELECTOR DIAL BULB REPLACER

C-3399 Double end to service both sizes of bulbs used in 1954 DeSoto and Chrysler cars equipped with Power Steering.

This simple, live rubber tool makes it possible to replace a burned out bulb in less than 5 minutes as shown. Without tool replacing a bulb takes about 60 minutes.



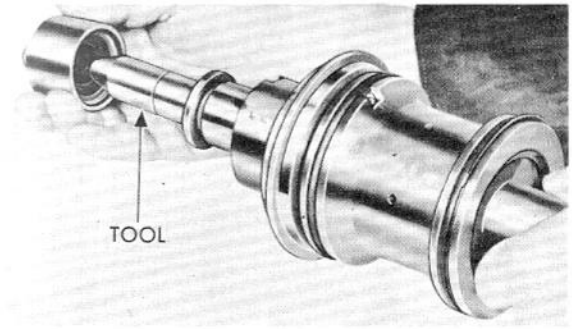
WORM CONNECTOR HOLDING SPANNER

C-3321 For all 1954, 1955 and 1956 DeSoto and Chrysler cars, also 1955 and 1956 Plymouth and Dodge cars with Power Steering.

WORM CONNECTOR NUT SPANNER

C-3326 For all 1954, 1955 and 1956 DeSoto and Chrysler cars, also 1955 and 1956 Plymouth and Dodge cars with Power Steering.

The C-3321 Spanner safely protects the finished surfaces of the guide keys on the worm connector while the C-3326 Face Spanner is used to loosen or firmly set the worm connector nut. Long handles on both spanners provide adequate leverage for safe, easy use.

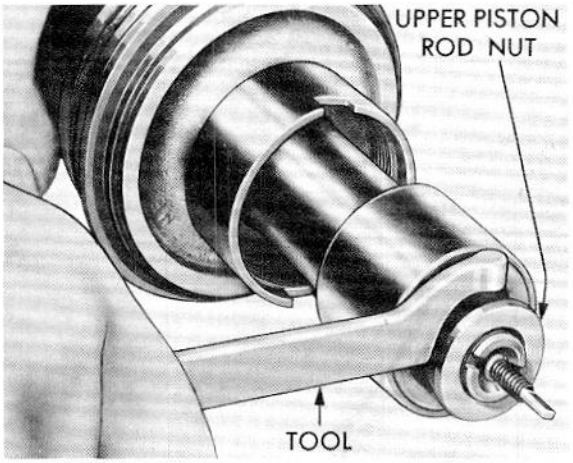


VALVE CONTROL SPACER SEAL INSTALLING THIMBLES

C-3329 For 1954, 1955 and 1956 DeSoto and Chrysler cars equipped with Power Steering.

C-3393 For 1955 and 1956 Plymouth and Dodge cars with Power Steering.

The smooth, tapered nose of these thimbles safely guides the piston rod through a new seal. Assembling these parts without these inexpensive thimbles can ruin a new seal and result in improper operation of the entire gear.



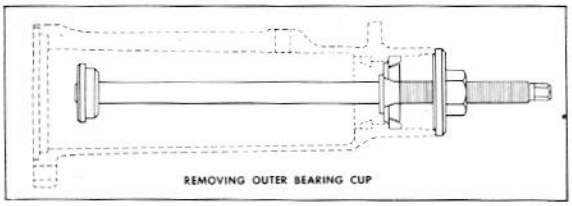
UPPER PISTON ROD NUT SPANNERS

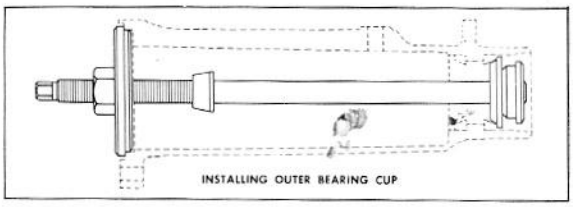
C-3328 For 1954, 1955 and 1956 DeSoto and Chrysler cars with Power Steering.

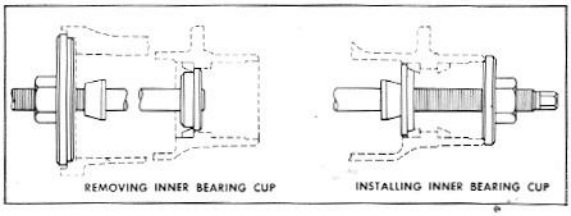
C-3452 For 1955 and 1956 Plymouth and Dodge cars with Power Steering.

Avoids Mutilation Of Nut Thru Haphazard Hammer And Punch Methods.

Attempting to adjust this important nut by driving it with a hammer and punch not only mutilates the nut but invariably bends the shaft and causes other serious troubles. Spanners have long handles to provide ample leverage to correctly adjust nuts to factory recommended specifications.





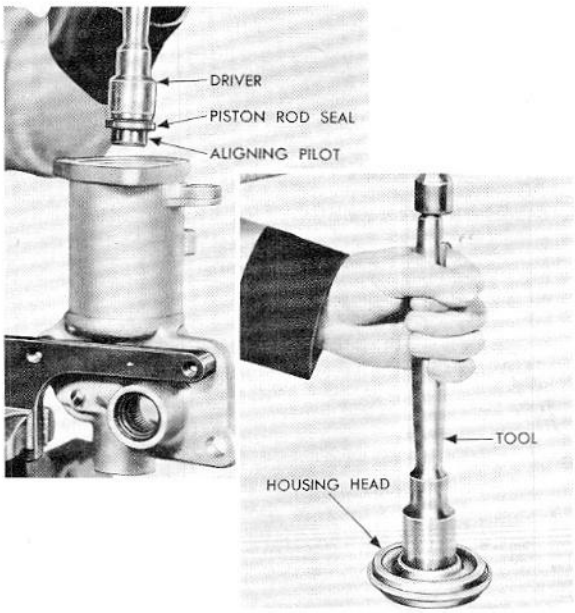


WORM HOUSING BEARING CUP REMOVER AND INSTALLER

C-3322 For 1954, 1955 and 1956 DeSoto and Chrysler cars, also 1955 and 1956 Plymouth and Dodge cars with Power Steering.

Tool Assures Proper Seating Of Bearings For Dependable Bearing Preload Adjustments.

The line drawings at the left show the correct assembly of the various parts of this simple tool for removal and installation of bearing cups in the aluminum worm housing. Tool helps assure properly seated and aligned bearing cups. Cups improperly seated can result in incorrect bearing preload that may seriously impair the operation of the complete gear.



PISTON ROD SEAL INSTALLING DRIVERS AND ALIGNING PILOTS

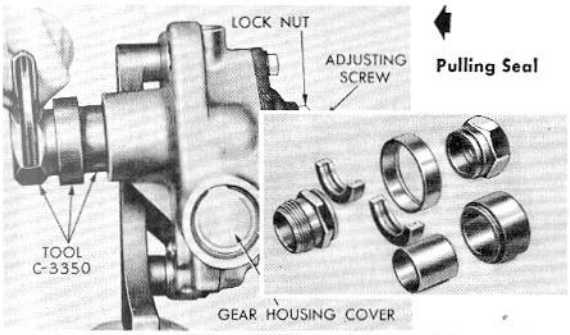
C-3331-A For 1954, 1955 and 1956 DeSoto and Chrysler cars with Power Steering.

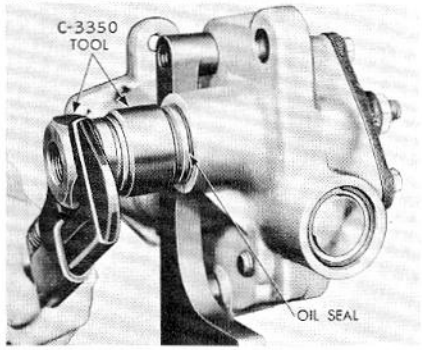
C-3395 For 1955 and 1956 Plymouth and Dodge cars with Power Steering.

New Driver Design Allows Installation Of Seals Without Removing Garter Springs.

The proper tool and ample care, to be sure these seals are properly installed, will be found very vital to a dependable power steering repair job involving the replacement of the piston rod seals. First model drivers required the removal of the garter spring before installing seal on aligning pilot. A slight amount of chassis grease will help hold the pilot in the driver as seal is started. Replace garter spring when seal is driven in place.

The lower illustration shows how the same drivers can be used to safely install a new seal in the aluminum housing head. The pilot is removed during this operation.



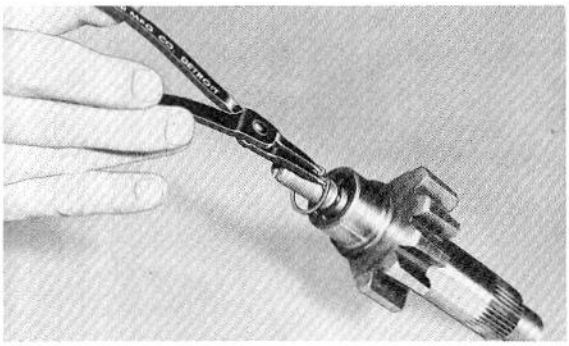


GEAR SHAFT OIL SEAL REMOVER AND INSTALLER

C-3350 For 1954, 1955 and 1956 DeSoto and Chrysler, also 1955 and 1956 Plymouth and Dodge cars with Power Steering.

Removes And Installs Seal On Car.

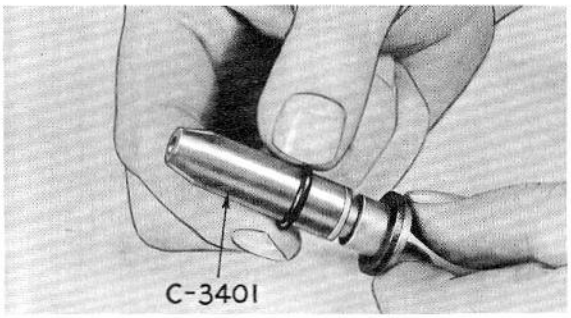
This multiple piece tool saves a great deal of valuable service time by allowing the removal and replacement of the gear shaft oil seal without removing the gear from the car. Extremely limited clearances prevent use of single piece tool with gear in car. The removing illustration shows the buttress threaded portion of the puller tightened into the damaged seal. The split collar was then slipped around this threaded section of the puller and locked in place with the slip ring. This coupled the threaded section of the puller to the large hex. head of the pressure nut, which could then be tightened against the end of the gear shaft to pull the seal.
A thin sleeve is supplied to pilot a new seal over the sharp threads and shoulders of the gear shaft. The lower illustration shows the solid piloted pressure sleeve of the tool assembled against a new seal. The large hex. pressure nut which screws onto the gear shaft supplies the installation pressure, as shown. This is a simple, easily used tool that saves a great deal of time servicing what may be termed one of the most vulnerable seals in the entire gear.



GEAR SHAFT ADJUSTING SCREW SNAP RING PLIERS

C-3229 For all Plymouth, Dodge, DeSoto and Chrysler cars with Power Steering.

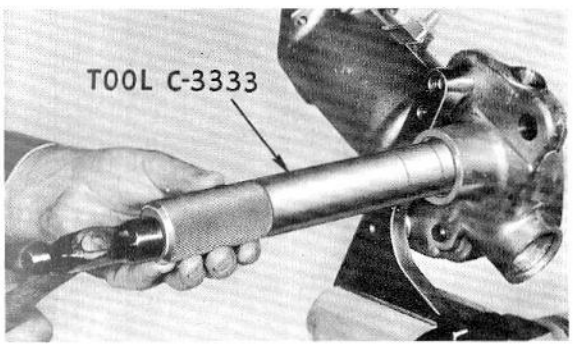
The proper size and design of snap ring pliers is very important to save time and avoid damage to parts. This inexpensive pair of pliers not only service this particular ring, but several others of the same size used in other locations. Extra pairs can be good investment for most any shop or mechanic.



GEAR SHAFT ADJUSTING SCREW "O" RING INSTALLING THIMBLE

C-3401 For all Plymouth, Dodge, DeSoto and Chrysler cars with Power Steering.

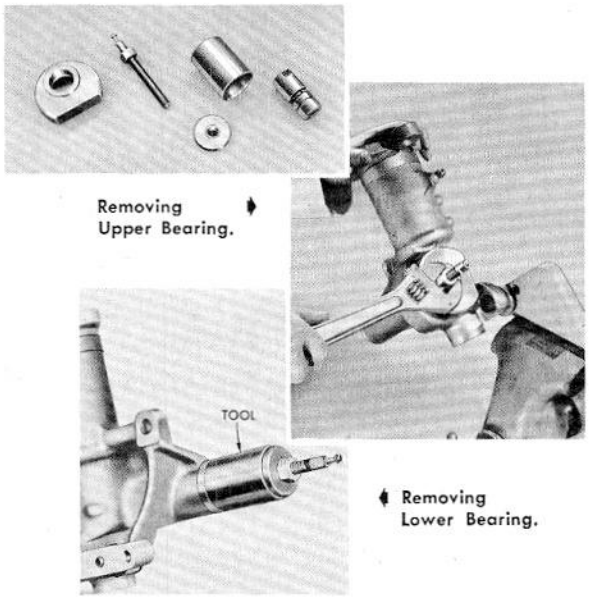
Use of a smooth, tapered thimble like this eliminates the danger of cutting a new "O" ring or stretching it out of shape during installation. Same principle is used in factory installation of original "O" ring.



GEAR SHAFT BEARING INSTALLING DRIVER

C-3333 For all Plymouth, Dodge, DeSoto and Chrysler cars with Power Steering.

Accurate depth marks on shank of this driver make it fast and easy to drive these bearings to their proper location in the housing. Always drive against end of bearings on which bearing's size and identification is stamped.



GEAR SHAFT BEARINGS REMOVER

C-3332 For all Plymouth, Dodge, DeSoto and Chrysler cars with Power Steering.

For Servicing Gears With Bushings Pressed In Place From Ends Of Housing Against Built-In Internal Shoulder.

The puller screw of this tool is fitted with a plunger that is used to push the expansion plug of the puller head when the head is attached to the puller screw. This provides a fast, effective means of locating and locking the puller head jaws in the shaft bearings. These bearings are located on Plymouth and Dodge gears so as to make it impractical to drive them out with an inexpensive driver. Use C-3333 Driver to install new bearings.

LOWER PISTON ROD SEAL PROTECTORS

C-3391 **FOUR** tooth, for 1954 DeSoto and Chrysler cars with Power Steering.

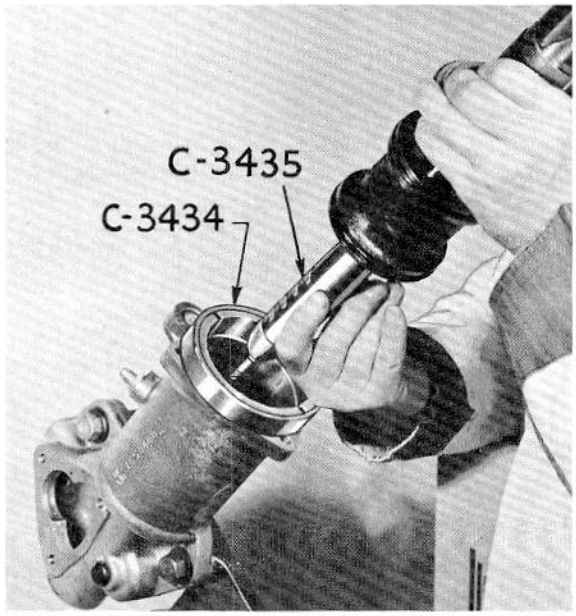
C-3435 **FIVE** tooth, for 1955 and 1956 Plymouth and Dodge cars with Power Steering.

C-3437 **FIVE** tooth, for 1955 and 1956 DeSoto and Chrysler cars with Power Steering.

Safely Guides Rod Teeth Thru New Seal.

These neoprene protectors fit into the rack teeth of the piston rod. A slight amount of chassis grease will hold them onto the rack while the whole piston assembly is started into position, as shown. Protectors guide rack teeth safely through the lower seal and greatly simplify this otherwise difficult assembly.

Attempting to make these installations without using these protectors will allow rack teeth to cut and mutilate new seals so badly that new seals will be needed.



PISTON AND RING ASSEMBLY INSTALLERS

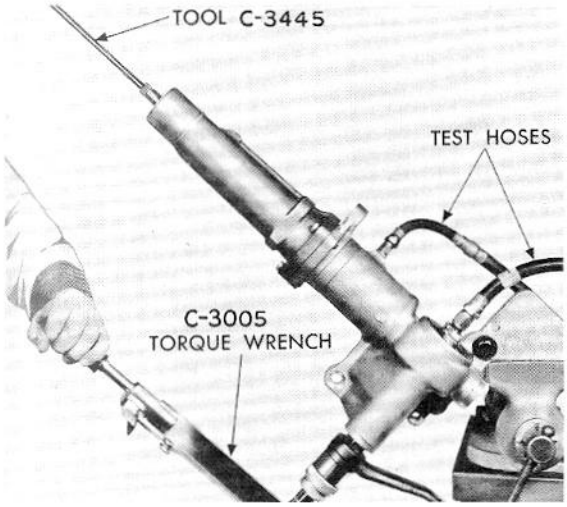
C-3344 For 1954, 1955 and 1956 DeSoto and Chrysler cars with Power Steering.

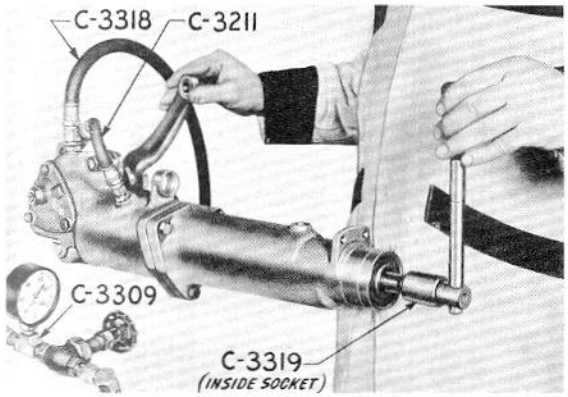
C-3434 For 1955 and 1956 Plymouth and Dodge cars with Power Steering.

SP-2604 Set of Adapter Plates for C-3344 to Service 1955 and 1956 Plymouth and Dodge cars with Power Steering.

Compresses Both Neoprene And Steel Rings For Easy Assembly Into Housing.

The two section inner ring is piloted in the cylinder bore and held in position with the outer lock ring. The inner sections have a tapered inside diameter to safely lead both the metal and neoprene piston rings into the cylinder bore. Attempting to install these rings without this special tool usually scuffs the upper neoprene ring sufficiently to require its replacement.

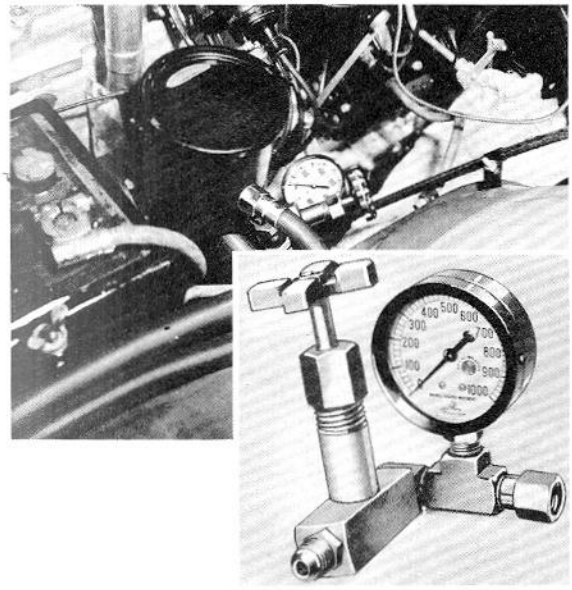




SPECIAL ADAPTERS FOR 1956 CARS

C-3532 Set of SP-2853 and SP-2869 Adapters to fit C-3309 Gauge and C-3211 Hose to 1956 Plymouth, Dodge, DeSoto, and Chrysler cars.

SP-2853 Double end ⅝" x 11 male adapter screws into power steering pump for connecting C-3309 and C-3211 swivel ends. SP-2869 Combination male and female adapter screws directly into C-3309 valve (temporarily replacing original fitting) to adapt gauge to power steering pump hose.



CONTROL VALVE CENTERING TOOL

C-3445 For all 1955 and 1956 Plymouth, Dodge, DeSoto and Chrysler cars with Power Steering.

Eliminates Dismantling Gear To Adjust Control Valve.

This special tool is used through a special drilled opening in the steering gear worm. This eliminates the need of dismantling the gear to accurately center the control valve. It may be used with gear in or out of the car.

C-3445 Tools are heat-treated to withstand three times the torque specified for turning this valve. Because of the very small area where this tool is used, its design is limited and consequently cannot be guaranteed.

Proper Size Torque Wrenches Are Essential For Dependable Power Steering Service.

Different sizes of torque wrenches may look alike to the uninitiated, but vary equally as much as a yardstick from a micrometer. Be sure your shop has the recommended design of inch-pound and foot-pound measuring torque wrenches as specified by your factory service manual.

POWER STEERING TEST HOSES

C-3211 High-Pressure Test Hose with Fittings—for all Plymouth, Dodge, DeSoto and Chrysler cars with Power Steering.

C-3318 Low-Pressure Test Hose with Fittings—for all Plymouth, Dodge, DeSoto and Chrysler cars with Power Steering.

Save Time By Pre-Testing Before Final Assembly—Used With Gear In Or Out Of Car.

Both of these special long hoses and the adapters supplied with them are essential for operating and adjusting the gear on the bench prior to assembly in the vehicle. Hoses are of the same quality as those connecting the gear and the steering pump on the car.

POWER STEERING HIGH-PRESSURE HYDRAULIC TEST GAUGE

C-3309-B For all Plymouth, Dodge*, DeSoto and Chrysler cars with Power Steering. (Includes C-3532 Adapters.)

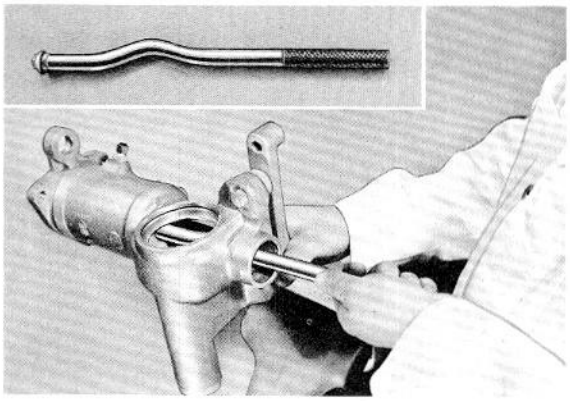
C-3388 * Special coupling hose to adapt C-3309B Gauge to some 1953 Dodge Power Steering Pumps.

Essential For Diagnosing Hydraulic Troubles.

Before attempting to service any part of the Power Steering Unit, the efficiency of the hydraulic pump should be carefully checked with this rugged 1,500 lb. test gauge. Its proper use can avoid unnecessary loss of time and possible replacement of good parts. A built-in valve provides a safe method of momentarily closing the hydraulic system for checking pump only. Do not operate pump with valve closed for more than one minute.

Pressure Gauge Available Separately.

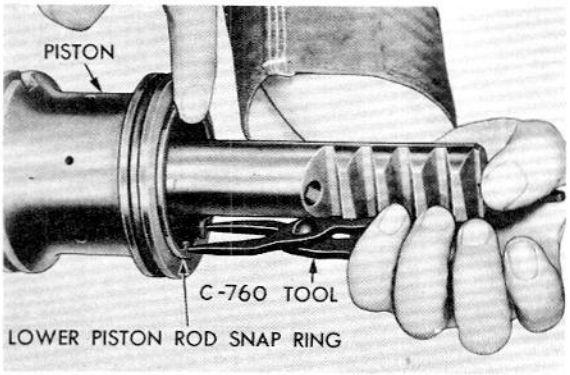
Should your test gauge be accidentally broken, this part only can be supplied separately—order SP-2819-A.



LOWER PISTON ROD SEAL REMOVER

C-3450 For all 1955 and 1956 Plymouth, Dodge, DeSoto and Chrysler cars with Power Steering.

A hardened, knife edge disc fastened to the end of this properly shaped tool is forced between the seal and the gear housing, as shown, to safely remove a damaged seal. This operation is done without damaging the aluminum housing. The disc is available separately and can be easily replaced if necessary.



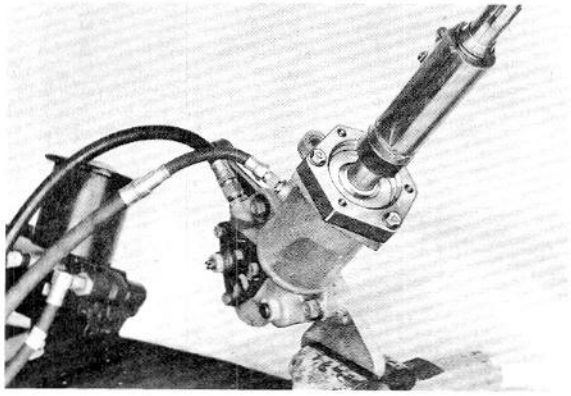
CONNECTING ROD RETAINER AND END PLUG RETAINER SNAP RING PLIERS

C-760 For all Plymouth, Dodge, DeSoto and Chrysler cars with Power Steering.

ROLLER PIN SUPPORT SNAP RING PLIERS

C-3128 For all Plymouth, Dodge, DeSoto and Chrysler cars with Power Steering.

Several pairs of these low-cost, special pliers will be found a valuable investment for any shop to save time and avoid over-expanding these small but vital snap rings. Nose end of pliers have unusual shape that easily and securely engage Truarc type snap rings. Needle nose pliers are not satisfactory for this service.

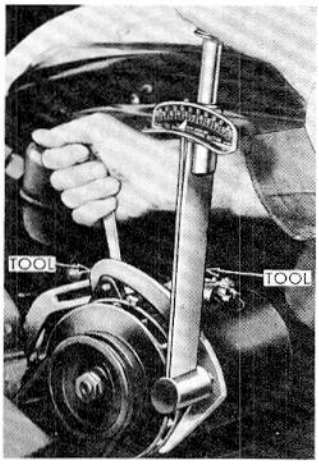


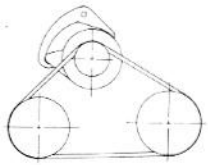
HOUSING HEAD RETAINER FLANGE

C-3469 For all 1955 and 1956 Plymouth, Dodge, DeSoto and Chrysler cars with Power Steering.

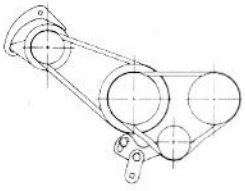
Allows Hydraulic Leak Test BEFORE *Installing Repaired Gear In Car.*

Temporary installation of this simple flange, as illustrated, makes it easy to test a repaired gear under full operating pressures. Leaks can be visibly detected at the reaction seal, upper valve rod "O" ring, or upper piston rod seal. Its use will also indicate a porous housing casting. Use flange to make tests before and after repairs.





Single step drive.



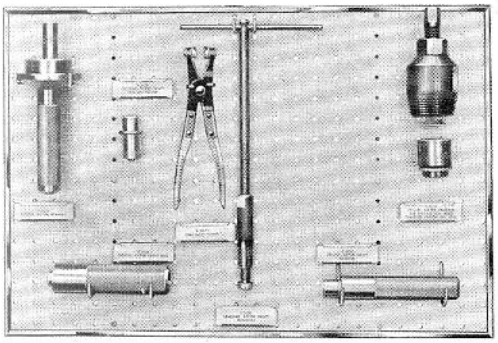
Double step drive.

GENERATOR BELT ADJUSTING TOOL

C-3379 For all 1955 and 1956 Plymouth, Dodge, DeSoto and Chrysler cars with Power Steering.

Allows Accurate Check Of Belt Tightness With Ordinary Torque Wrench.

Here is a practical method of accurately adjusting the generator driving belt to assure positive drive without unnecessary strain on pump, pump bearings, gears and belts. Tool may be used with any accurate foot-pound calibrated torque wrench. Consult your factory specifications for proper belt tension.



Tool Board is NOT included in the C-3290-A Tool Set.

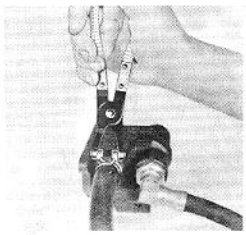
POWER STEERING HYDRAULIC PUMP SERVICE TOOL SET

C-3290-A For single rotor pumps used on all 1951 thru 1955 Plymouth, Dodge, DeSoto and Chrysler cars with Power Steering, also 1956 Plymouth and Chrysler cars with Power Steering.

These few, low-cost tools allow these important pumps to be effectively re-built at a small fraction of the cost of a new pump.

- **C-3214 Puller**—Main Bearing
- **C-3228 Thimble**—Shaft Oil Seal Protecting
- **C-3229 Pliers**—Flow Control Valve Snap Ring
- **C-3230 Driver**—Shaft Oil Seal Installing
- **C-3233 Driver**—Shaft Bushing Installing
- **C-3234 Adapter**—For using C-3214 Puller (C-3214 also pulls pinion oil seals)
- **C-3250 Pliers**—Hose Clamp
- **C-3251 Driver**—Main Bearing Installing

Does NOT INCLUDE C-3185 Puller Unless Ordered As An EXTRA.

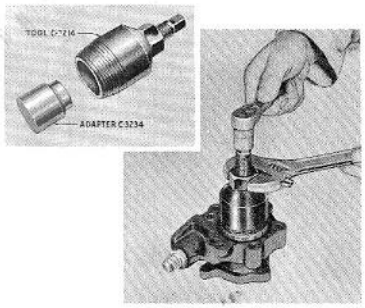


Same As Used For Water Pump Service!

HOSE CLAMP PLIERS

C-3250 For all sizes.

Latest full swivel jaw design pliers have deep slots to hold clamp ends securely.

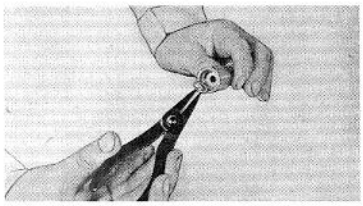


MAIN BEARING PULLER AND ADAPTER

C-3214 Puller only.

C-3234 Adapter only.

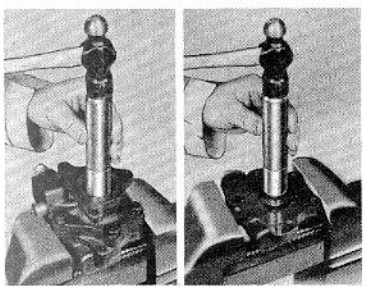
Cork screw threads bite into bearing. Adapter fits pump bore and provides pressure anvil for puller screw. C-3214 also pulls pinion oil seals.



FLOW CONTROL VALVE SNAP RING PLIERS

C-3229 Compression type.

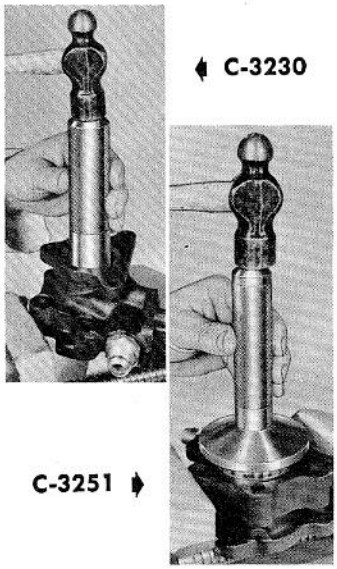
Don't confuse these with ordinary, needle nose pliers—jaws have special design to easily hold snap rings.



SHAFT BUSHINGS DRIVER

C-3233

A single driver installs and properly locates both of these bushings, one in each section of the pump, as shown.



PUMP SHAFT OIL SEAL DRIVER

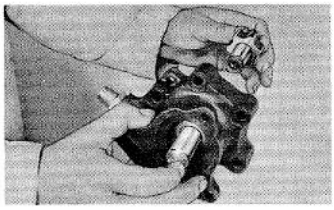
C-3230

Attempting to install a new seal with a makeshift driver can easily result in a leaky and unsatisfactory repair job. Use the proper driver and be sure of a good job.

MAIN BEARING INSTALLING DRIVER

C-3251

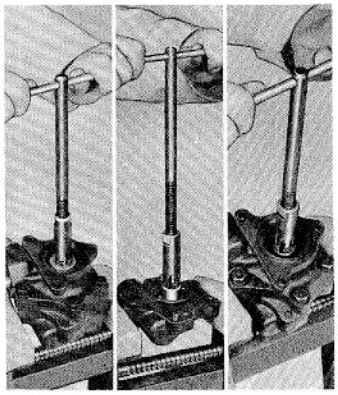
Extra care should be taken to accurately install this steel-backed, pre-machined, precision-type bearing. Driver has an eccentric pilot to properly align new bearing.



OIL SEAL PROTECTING THIMBLE

C-3228

Attempting to assemble the pump shaft through the oil seal without this protecting thimble could cause a scratch or cut in the seal that may result in a serious hydraulic leak.



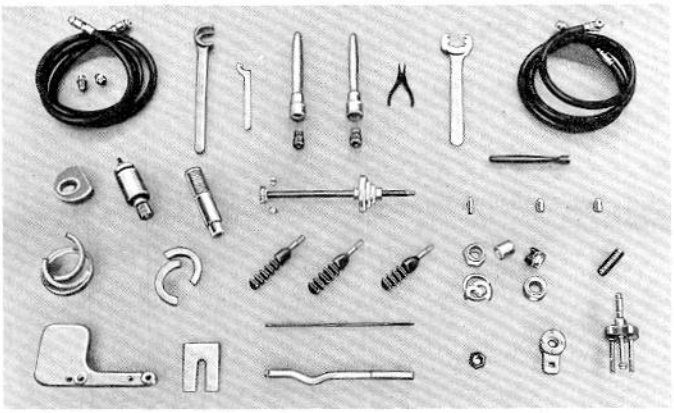
SHAFT BUSHINGS AND SEAL REMOVER

C-3185 Also services Vane Pump.

The three illustrations at left show how this single tool easily performs three important services on the power steering pumps.

Because many dealers have this tool for servicing clutch pilot bushings it is NOT INCLUDED in the C-3290-A Set.

POWER STEERING (COAXIAL TYPE) SERVICE TOOL SET FOR PLYMOUTH, DeSOTO, AND CHRYSLER GEARS

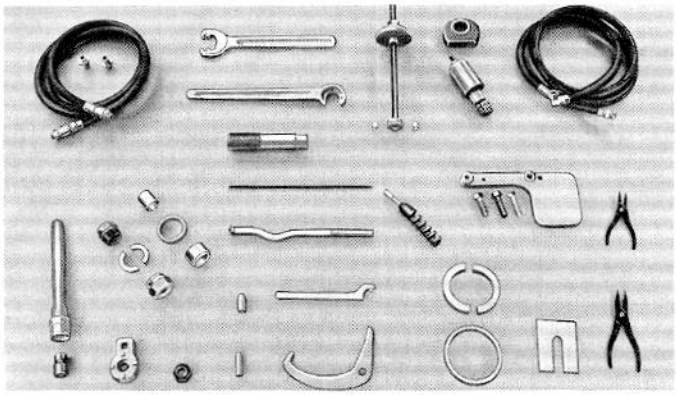


C-3408-C Set of 30 Essential Tools.

In addition to this group of Full-Time Power Steering Tools certain other special tools, used for different services, are also required. See next page for detail listing of the additional dual-purpose, special tools needed to supplement these tools for complete Power Steering Service. As tools in a specialized group such as this change, the same group number is retained and a suffix added. Subsequent changes are indicated by succeeding suffix letter changes. The "C" suffix on this set consequently indicates the fourth change in this tool group.

C-3408-C Contains Following Special Tools:

C-3211	**HOSE**—8ft. High-Pressure, Power Steering Test
C-3229	**PLIERS**—Snap Ring—Gear Shaft Adjusting Screw
C-3318	**HOSE**—Low-Pressure Test
C-3319	**NUT**—Splined Worm Shaft Holding
C-3320	**WRENCH**—Worm Shaft Bearing Adjusting Nut
C-3321	**SPANNER**—Worm Connector Holding
C-3322	**REMOVER AND INSTALLER**—Worm Housing Bearing Cups
C-3323	**BRACKET**—Gear Body Holding
C-3326	**SPANNER**—Worm Connector Nut Face
C-3328	**SPANNER**—Upper Piston Rod Nut
C-3329	**THIMBLE**—Control Valve Spacer Seal Installing
C-3331-A	**DRIVER AND PILOT**—Pilot Rod Seal Installing
C-3332	**REMOVER**—Gear Shaft Bearings
C-3333	**DRIVER**—Gear Shaft Bearing Installing
C-3344	**INSTALLER**—Piston and Ring Assembly
C-3350	**TOOL**—Gear Shaft Oil Seal Removing and Installing
C-3391	**PROTECTOR**—Lower Piston Rod Seal
C-3392	**WEDGE**—Coupling Removing
C-3393	**THIMBLE**—Control Valve Spacer Seal Installing
C-3395	**DRIVER AND PILOT**—Piston Rod Seal Installing
C-3399	**REPLACER**—Gear Selector Dial Bulb
C-3401	**THIMBLE**—Gear Shaft Adjusting Screw "O" Ring Inst.
C-3428	**PULLER**—Steering Wheel
C-3435	**PROTECTOR**—Lower Piston Rod Seal
C-3437	**PROTECTOR**—Lower Piston Rod Seal
C-3445	**TOOL**—Control Valve Centering
C-3450	**REMOVER**—Lower Piston Rod Seal
C-3469	**FLANGE**—Housing Head Retainer
SP-2604	**ADAPTER PLATES**—Use with C-3344—For Installing Piston and Ring Assembly on 1955 Plymouth.
SP-2623	**SPECIAL SCREW**—For Adapting C-143 Steering Arm Puller to Power Steering Models



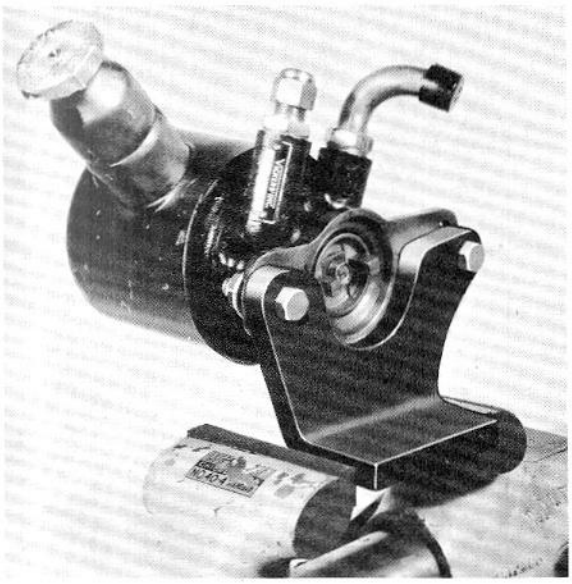
POWER STEERING (COAXIAL TYPE) SERVICE TOOL SET FOR DODGE AND PLYMOUTH GEARS

C-3463-A Set of 24 Essential Tools.

These specialized tools and your factory maintenance instructions make Power Steering service just as easy and routine as any other common automotive service. Be sure your shop has these important tools—and knows how to use them—their investment will earn dividends in added profit and good will.

C-3463-A Contains Following Special Tools:

C-760	**PLIERS**—Connecting Rod and End Plug Retainer Snap Ring
C-3211	**HOSE**—High-Pressure Test
C-3229	**PLIERS**—Snap Ring—Gear Shaft Adjusting Screw
C-3318	**HOSE**—Low-Pressure Test
C-3319	**NUT**—Splined Worm Shaft Holding
C-3320	**WRENCH**—Worm Shaft Bearing Adjusting Nut
C-3321	**SPANNER**—Worm Connector Holding
C-3322	**REMOVER AND INSTALLER**—Worm Housing Bearing Cups
C-3323	**BRACKET**—Gear Body Holding
C-3326	**SPANNER**—Worm Connector Nut Face
C-3332	**REMOVER**—Gear Shaft Bearing
C-3333	**DRIVER**—Gear Shaft Bearing Installing
C-3350	**TOOL**—Gear Shaft Oil Seal Removing and Installing
C-3379	**TOOL**—Generator Belt Adjusting
C-3392	**WEDGE**—Coupling Removing
C-3393	**THIMBLE**—Control Valve Spacer Seal Installing
C-3395	**DRIVER AND PILOT**—Piston Rod Seal Installing
C-3401	**THIMBLE**—Gear Shaft Adj. Screw "O" Ring Installing
C-3434	**INSTALLER**—Piston and Ring
C-3435	**PROTECTOR**—Lower Piston Rod Seal
C-3445	**TOOL**—Control Valve Centering
C-3450	**REMOVER**—Lower Piston Rod Seal
C-3452	**SPANNER**—Upper Piston Rod Nut
C-3469	**FLANGE**—Housing Head Retainer



POWER STEERING PUMP HOLDING BRACKET

C-3482 For 1956 Dodge and DeSoto Vane-type pumps.

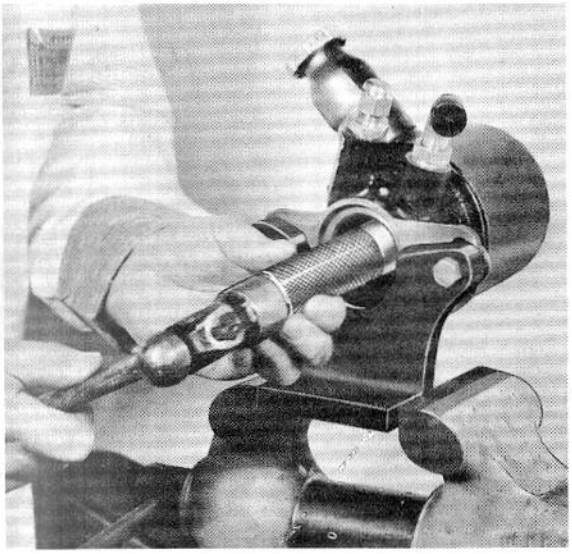
Safely Holds Pump At Most Convenient Working Angle.

There is no problem of clamping the pump in the wrong spot when this special vise bracket is used. Any tear-down or re-building service operation can be easily performed without removing pump from bracket.

CERTAIN DUAL-PURPOSE SPECIAL TOOLS ARE ESSENTIAL FOR COMPLETE POWER STEERING SERVICE

These tools are not included in the specialized tool kits described on the previous page, as they are all dual-purpose tools and may already have been purchased. Many shops may, therefore, need two or more sets.

C-485	**WRENCH**—Torque - 175 ft.-lb. - 5 lb. Dial Graduations.
C-524	**WRENCH**—Torque - 100 ft.-lb. - 10 lb. Dial Graduations.
C-612	**PULLER**—Steering Wheel.
C-685	**WRENCH**—Torque - 300 in.-lb. - 12½ lb. Dial Graduations.
C-760	**PLIERS**—Snap Ring - Connecting Rod Retainer - End Plug Retainer.
C-3005	**WRENCH**—Torque - 100 ft.-lb. Sensory Type - 10 lb. Dial Graduations.
C-3128	**PLIERS**—Snap Ring - Roller Pin Support.
C-3290-A	**TOOL KIT**—Single Rotor Pump (See Page 110).
C-3309-B	**GAUGE**—Hydraulic Pump and Power Steering Gear Checking.
C-3402	**PULLER—Steering Shaft Arm.**
	TOOL DISPLAY BOARD—Full-Time Power Steering.

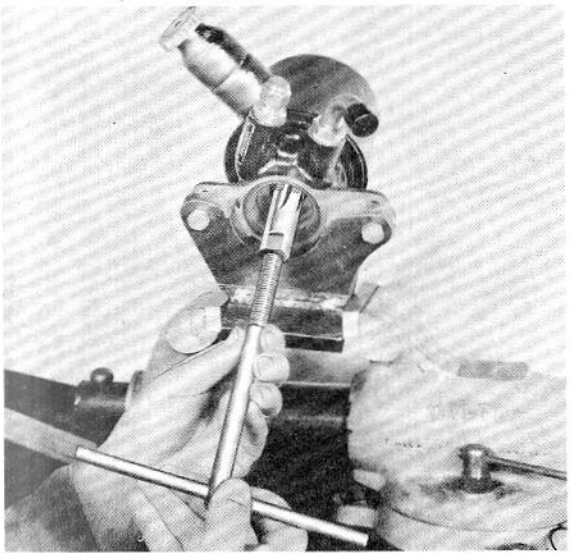


POWER STEERING PUMP HOUSING SEAL DRIVER

C-3486 For 1956 Dodge and DeSoto Vane-type pumps.

Use C-3185 Puller To Remove Seal.

Driver is designed to apply installation force on outside diameter of the seal. This assures a properly positioned, leakproof seal that should provide service comparable to the original installation. C-3185 Puller is illustrated on page 110 servicing single rotor pump.



POWER STEERING PUMP SHAFT AND BEARING PULLER

C-3484 For 1956 Dodge and DeSoto Vane-type pumps.

Avoid accidental damage to the splined end of the shaft by using this inexpensive puller. Puller protects pump body and safely pulls shaft and bearing assembly. Puller eliminates the need of taking extra time and the chance of damaging the bearing or shaft by attempting to remove them with two screw drivers.

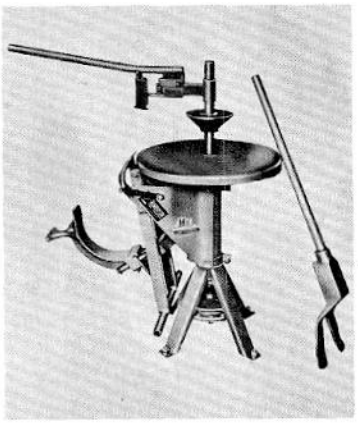
TIRE CHANGING MACHINES

C-3453 Double Bead Breaker
Complete with tire demounting and mounting tools.

C-3446 Single Bead Breaker.
Complete with tire demounting and mounting tools.

Demounts And Mounts All Passenger Car And Light Truck Tires.

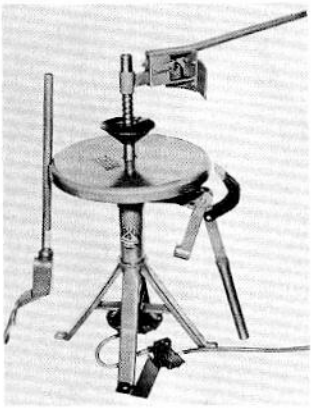
Here are the machines that will help your shop be competitive on all important tire services. They save labor and avoid tire abuses by eliminating the need to use hammers and tire irons to change all kinds of tires including white sidewalls, premium, safety rim, tubeless, etc. Machines bolt to floor and are easy to operate, even unskilled service men can use them safely and save time. Instruction manual with twenty, easy-to-follow, action pictures is included with every Changer.



◀ C-3453 Double Bead Breaker Model.

Air - Powered Lock Holds Wheel Securely On Both Models.

C-3446 Economy Model Single Bead Breaker. ▶



C-3447 Tire Spreader And Tool Stand.

Demounting Tool Safely Lifts Bead Over Wheel Rim.

TIRE SPREADER AND TOOL RACK

C-3447 Rack—complete with Tire Spreader.

C-3454 Tire Spreader only.

Spreader Mounts On Tire Changers Or Tool Rack.

You can boost tire changing efficiency 20% through the use of the tool rack and tire spreader. Spreader slips over center post of rack or tire changers.

ECONOMY MODEL TIRE SPREADER

(Not Illustrated)

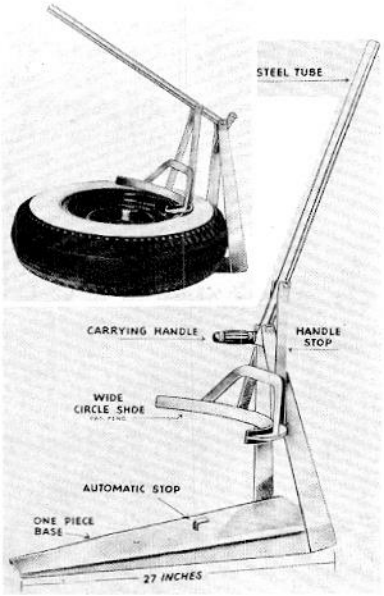
C-3500 For All Passenger Car Tires.

Tool is of a three leg design with a cam type lever that locks and holds itself in tire with beads expanded for easy internal inspection.

LOW-COST HEAVY-DUTY BEAD BREAKER

C-3455-A Services all 14" to 16" drop center wheels.

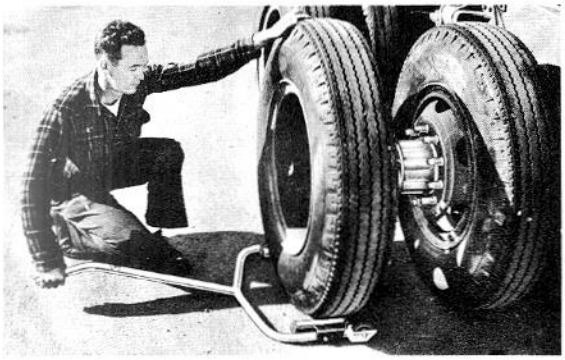
The wide, circle pressure shoe covers ⅓ of the tire diameter. It presses first at the middle of the shoe with the ends following through to roll the tire off the rim in a single smooth operation.



TUBELESS TIRE TEST TANK

C-3457 For 14" to 20" x 9.50 wheels.

Tank is 35¼" long x 11¾" wide and 13½" deep. It is made of aluminum, with rolled seams to eliminate soldered joints that break and leak. Special wheel chuck supports wheel while it is rotated.

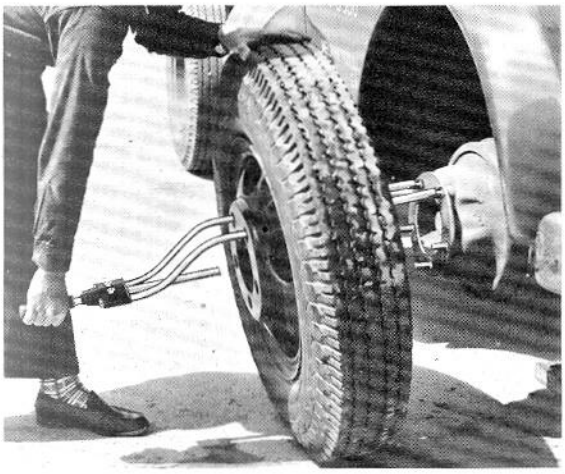


SINGLE TRUCK TIRE AND WHEEL LIFTER

DD-1152 For all tires from 6.00-16 to 11.00-22.

Ball Bearing Rollers Make Wheel Easy To Rotate And Align With Mounting Studs.

A simple heavy-duty tool like this takes the work out of lining up heavy tire and wheel assemblies. Needs only 25 lbs. of effort to move largest rated tire into position. Roller brackets are mounted on pivots to automatically level wheel and require only straight up lift. Leaves one hand free to steady tire and wheel for rotating it to match wheel studs. Large 3" rubber tired wheels operate easily on uneven surfaces.

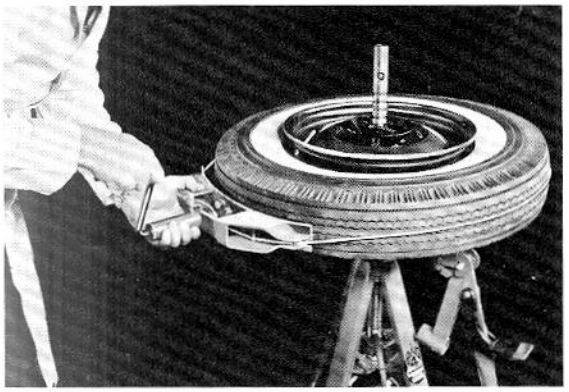


TRUCK TIRE AND WHEEL MOUNTING TOOL

DD-1230 For all wheels up to 300 lbs.

Eliminates Awkward Lifting— Feeds Wheel Into Place Easily.

Here is a safe, dependable tool that fits all types of truck and bus wheels. A simple adjustment adapts tool to odd or even stud wheels. It is ideal for both heavy-duty shop use and emergency road service, and makes truck wheel changing easier, faster and safer.

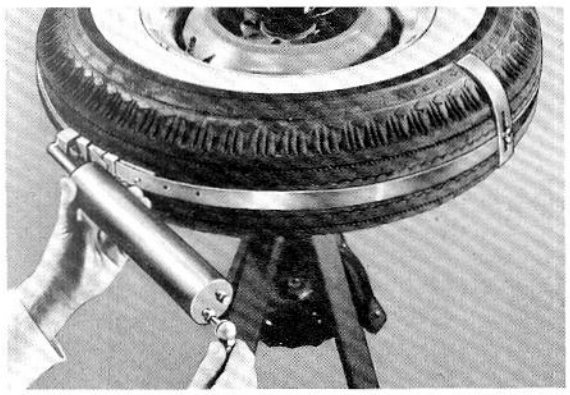


TUBELESS TIRE BEAD EXPANDER

C-3440 For all tubeless tires.

Fast—Mechanically Operated— Use Anywhere.

Airplane type, woven cable automatically distributes compression pressure over entire circumference of tire, as it holds beads tight against wheel to allow initial inflation. Automatic lock holds tool in position. Remove tool when tire beads seal, then continue to inflate tire to desired pressure.

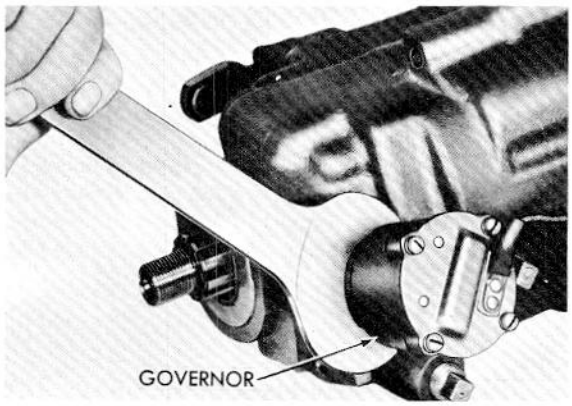


AIR-POWERED BEAD EXPANDER FOR TUBELESS TIRES

C-3465 For all 5.25 to 8.90 tires.

Automatically Releases As Tire Is Inflated.

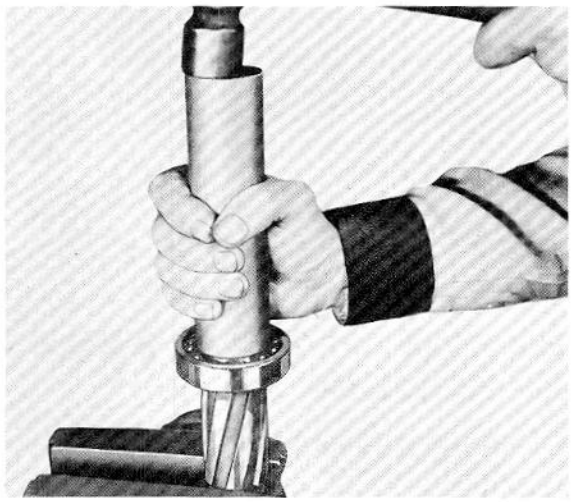
Fast, safe, foolproof, air cylinder does all the work of compressing the tire beads against the wheel to allow tire to initially fill with air. As tire is inflated to desired pressure, its expansion automatically overcomes pressure in air cylinder, which releases compression band.



OVERDRIVE GOVERNOR REMOVING AND INSTALLING WRENCH

C-3193 For all models equipped with Overdrive.

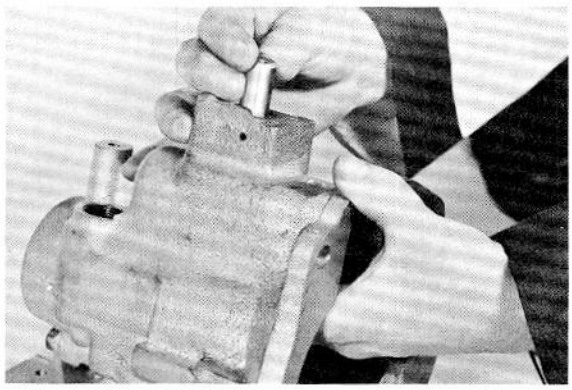
Removal of the governor for inspection is greatly facilitated through the use of this special wrench. Its use avoids damage to this sensitive electrical unit during removal or installation.



MAINSHAFT BEARING INSTALLING SLEEVE

C-3194 For all models equipped with Overdrive.

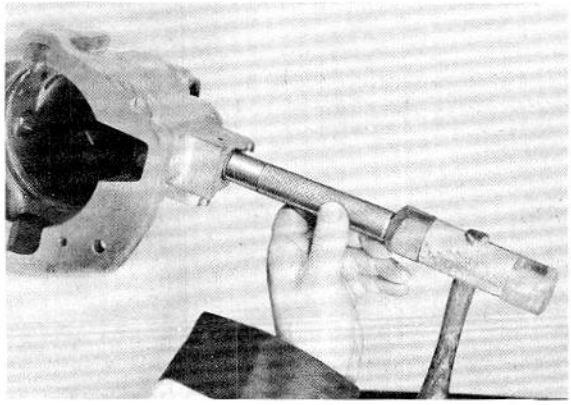
This deep, tubular driver makes it easy to install the mainshaft bearing. Makeshift drivers made from pipe do not usually properly fit the bearing hub. Driving on the outer race of the bearing can ruin a new bearing. The modest cost of a special driver like this can be saved on a single job by saving lost time spent searching for a piece of pipe from which to make a makeshift tool.



LOCK-OUT CONTROL SHAFT INSTALLING AND OIL SEAL PROTECTING THIMBLE

C-3195 For all models equipped with Overdrive.

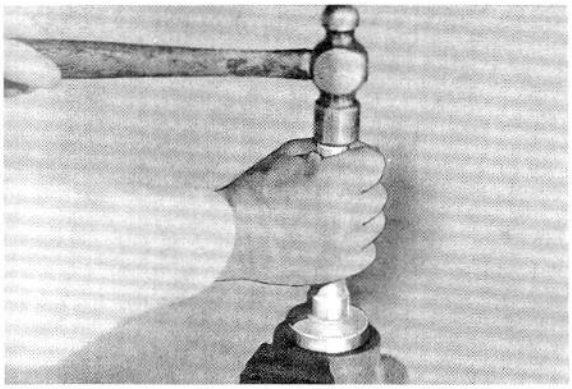
This smoothly machined thimble should be carefully inserted through the oil seal, and used as a pilot to safely guide the control shaft through the seal as illustrated. The sharp edges of the control shaft might otherwise scratch the smooth internal sealing edges of the seal and cause an annoying and damaging oil leak. Thimble is supplied with wood protecting plug. This wooden plug should be reinstalled in the thimble after use to protect the thin, smooth edges of the thimble.



CONTROL SHAFT OIL SEAL INSTALLING DRIVER

C-3198 For all models equipped with Overdrive.

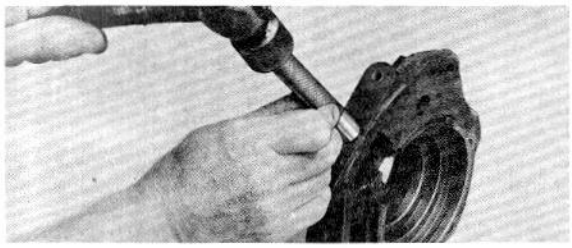
A simple, inexpensive, special driver like this can be the difference between a trouble-free repair job, and one that results in a comeback and all its annoying and expensive complications. Be safe—be sure—provide your shop with the **right** tool for the **right** job—they will pay dividends in better, more dependable, service work.



OVERDRIVE HOUSING BALL BEARING DRIVER

C-3204 For all models equipped with Overdrive.

The ball bearing at the rear of the Overdrive housing is a tight fit on its outside diameter and a slip fit on the output shaft. This driver is machined to pilot on the inside diameter of a new bearing and drive against the outer race only.

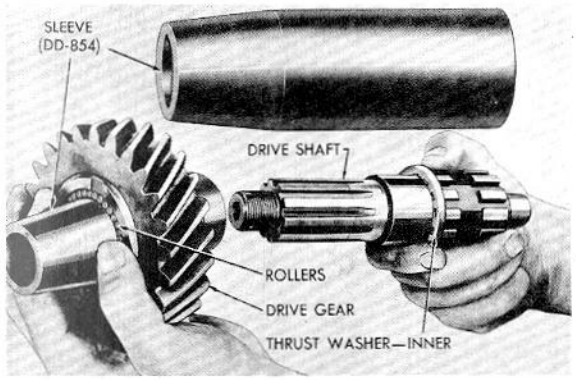


PAWL OPERATING ROD SEAL INSTALLING DRIVER

C-3207 For all models equipped with Overdrive.

Install a new seal carefully with a proper fitting, special driver and you'll usually save time over half-hazard, makeshift service methods. This driver has a smooth fitting pilot to protect inner surface of seal while it is securely driven into the overdrive housing.

TRANSFER CASE



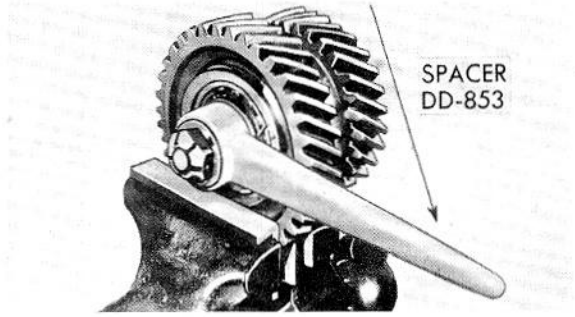
TRANSFER CASE DRIVE GEAR NEEDLE BEARING INSTALLING SLEEVE

DD-854 For Dodge Power Wagons.

Sleeve makes it easy to assemble needle bearings in gear. It is then pushed out as shaft is assembled in gear, as shown.

See Page 8 for DD-993 Transfer Case Rear Oil Seal Puller.

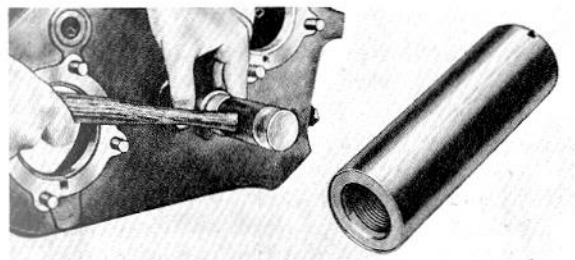
Be sure to order this important "corkscrew" type puller when obtaining other Transfer Case Tools.



TRANSFER CASE IDLER SHAFT BEARING ADJUSTING SPACER

DD-853 For Dodge Power Wagons.

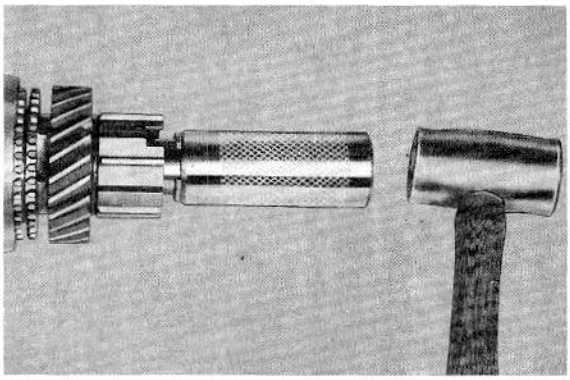
Accurate adjustment of the idler shaft bearings is essential for them to give long, trouble-free service. This spacer makes it easy to accurately make this adjustment with the gears out of the case, as shown.



TRANSFER CASE IDLER SHAFT REMOVING AND INSTALLING ARBOR

DD-852 For Dodge Power Wagons.

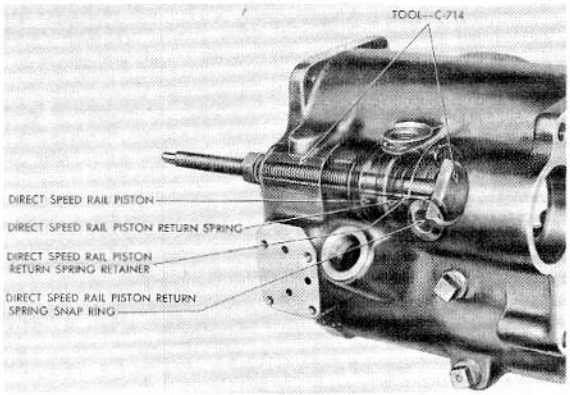
Use this special screw-on type protector when it is necessary to drive the idler shaft from the transfer case.



TRANSMISSION THIRD AND DIRECT SPEED SNAP RING INSTALLING THIMBLE AND DRIVER

C-717 For all Dodge, DeSoto and Chrysler hydraulically operated transmissions.

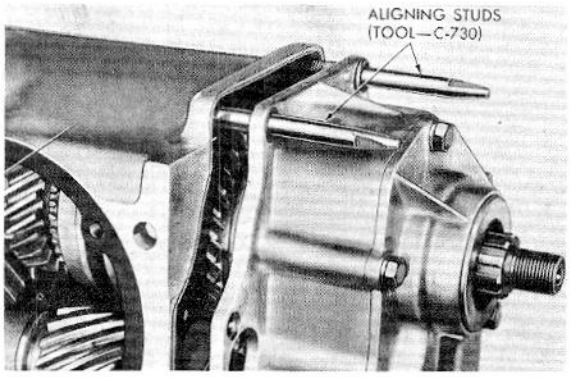
This is a two-piece tool made up of a thimble and driver. The thimble slips over the end of the transmission shaft providing a tapered pilot which guides and expands the snap ring into position when driven as illustrated with the fitting driver.


TOOL—C-714
DIRECT SPEED RAIL PISTON
DIRECT SPEED RAIL PISTON RETURN SPRING
DIRECT SPEED RAIL PISTON RETURN SPRING RETAINER
DIRECT SPEED RAIL PISTON RETURN SPRING SNAP RING

TRANSMISSION PISTON RETURN SPRING COMPRESSOR

C-714 For all Dodge, DeSoto and Chrysler hydraulically operated transmissions.

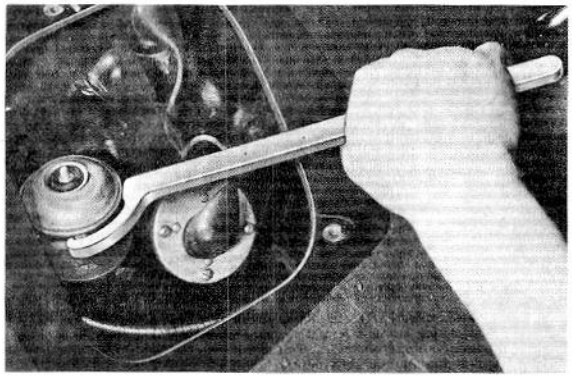
Compressing the piston return spring with this tool as illustrated removes the tension on the piston return spring snap ring so that ring can be safely removed from the front end of the transmission. Tool also saves much time in reassembling this same spring and snap ring.



TRANSMISSION ALIGNING STUDS (Pair)

C-730 For all Dodge, DeSoto and Chrysler hydraulically operated transmissions.

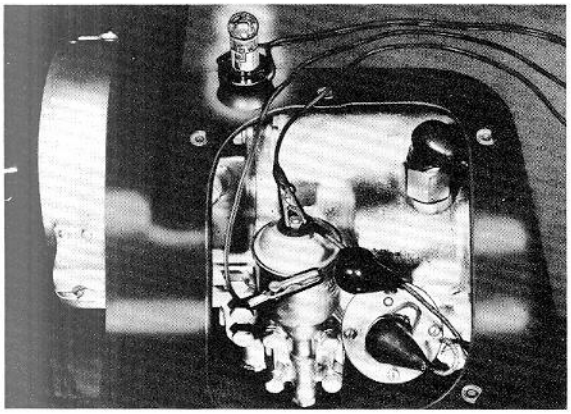
Aligning the transmission main shaft to the transmission case while simultaneously guiding it onto the clutch gear is a job for an expert without the use of these pilot studs. Using them, any semi-skilled mechanic can perform this service operation quickly and easily. Studs are fitted with a tapered nose and a milled wrench flat.



TRANSMISSION SOLENOID REMOVING AND INSTALLING SPANNER

C-750 For all Dodge, DeSoto and Chrysler hydraulically operated transmissions.

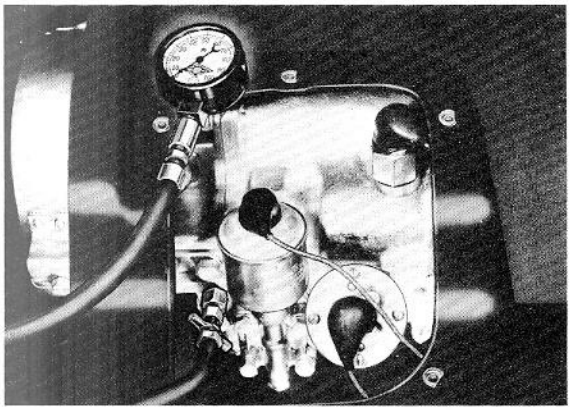
Avoid danger to transmission solenoids by providing your shop with this special long handled hook spanner which firmly grips the solenoid. Without it a hammer and punch must be used to remove this essential electrical part.



TRANSMISSION ELECTRICAL CONTROL CHECKING LIGHT

C-744 For all Dodge, DeSoto and Chrysler hydraulically operated transmissions.

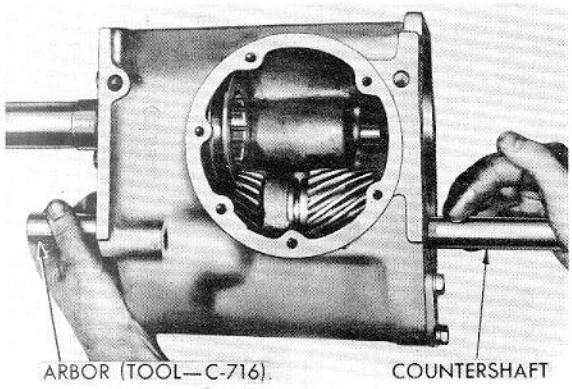
A simple test light like this with long alligator clip equipped leads, will save a great deal of time in tracking down transmission electrial control difficulties. It is fitted with a rubber suction cup that attaches easily in any convenient position. A typical use of this light is illustrated.



TRANSMISSION OIL PRESSURE CHECKING GAUGE

C-731 For all Dodge, DeSoto and Chrysler hydraulically operated transmissions.

Unnecessary service work on the hydraulically operated part of this transmission can often be avoided by using this specialized pressure gauge to check oil pressure as shown.



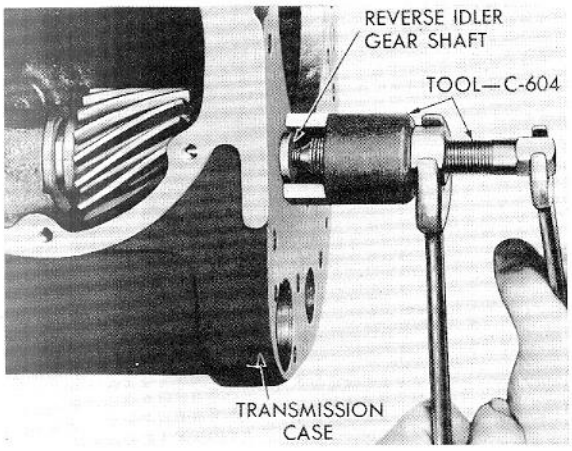
TRANSMISSION COUNTERSHAFT NEEDLE BEARING ASSEMBLING ARBORS

C-578 For 1940 to 1955 Plymouth, Dodge, DeSoto and Chrysler 3 speed transmissions.

C-605 For 1939 to 1942 DeSoto and Chrysler Vacamatic and Simplimatic transmissions.

C-716 For 1946 thru 1953 Dodge, DeSoto and Chrysler Hydraulically Operated transmissions.

Each arbor is carefully ground to a precision slip fit so that it may be used to push the transmission countershaft from place and still keep all the numerous "needle" or small roller bearings in place. Because each arbor is just the exact length the complete countershaft gear assembly including thrust washers can be lifted (or replaced) intact from the transmission. A slight taper is machined on the end of each arbor to make it easy to align itself as it enters the thrust washers.

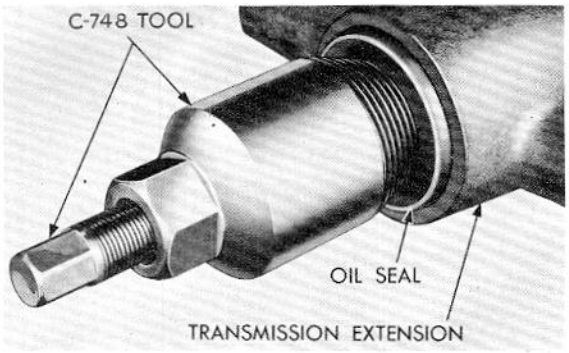


TRANSMISSION REVERSE IDLER GEAR SHAFT PULLERS

C-604 For all Dodge, DeSoto and Chrysler hydraulically operated transmissions.

C-603 For all 4 speed transmissions.

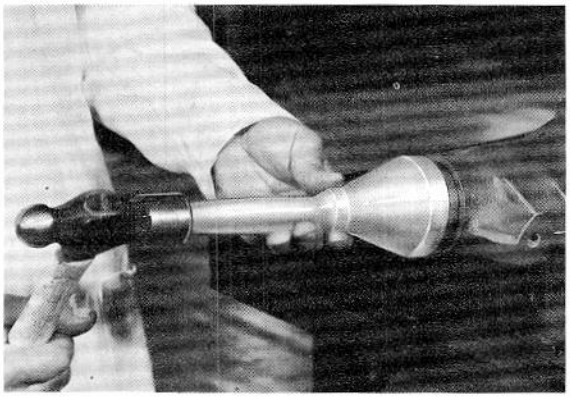
The reverse idler gear shaft of these transmissions assembles flush with the face of the transmission housing leaving no accessible pulling shoulder—neither can it be driven out of the case with a punch and hammer from the front of the transmission. Every shop should therefore be equipped with one of these simple time-saving pullers which attaches to the shaft by threading into the lock plate screw thread in the end of the gear shaft.



TRANSMISSION REAR OIL SEAL PULLER

C-748 For all Plymouth, Dodge, DeSoto and Chrysler cars.

This is the same effective puller that is used so successfully for removing pinion oil seals. It can be safely used on cars equipped with hydraulically operated transmissions. Puller has a sharp, tapered, buttress-type thread that "bites" into the metal housing of the oil seal like a corkscrew. Many mechanics like this puller so well they buy their own. Equip your shop with several—see Page 8 for complete listing of all the various sizes of this type of puller.

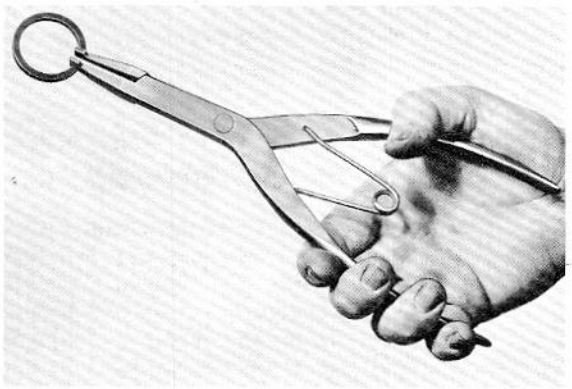


TRANSMISSION REAR OIL SEAL INSTALLING DRIVER

C-3105 For ¾" thick seals used in 1940 to 1951 cars with hydraulically operated transmissions. Also standard 3 speed transmissions.

C-3205 For all 1954, 1955 and 1956 PowerFlite transmissions also ½" thick seals used in 1952 and 1953 cars with hydraulically operated transmission.

These drivers are machined to install these seals to the proper depth. Do Not Use the obsolete C-579 Driver on these seals as it will not drive them deep enough. Seals not installed deep enough may cause interference and premature seal failure.

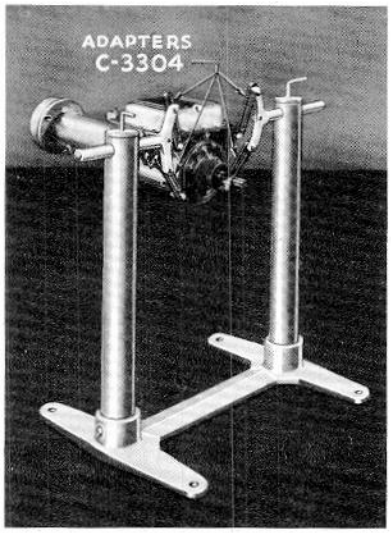


SNAP RING REMOVING AND INSTALLING PLIERS

C-484 For all cars. (Illustrated.)

C-3301 Parallel jaw type. (See page 125 for illustration.)

The hardened nose of these special pliers is serrated to firmly grip many different sizes of snap rings as shown. An automatic return spring helps provide perfect control during installation or removal of snap rings from very limited positions. Each design has its superior quality of design for specific uses—better mechanics own **both** styles.



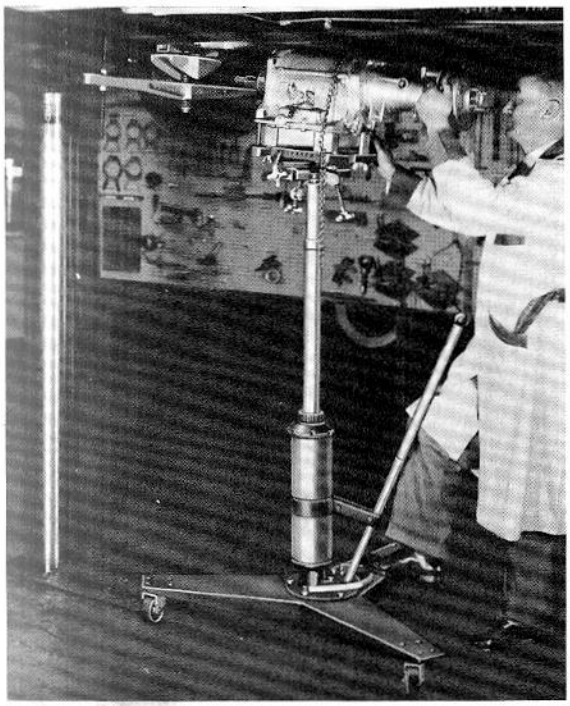
DIFFERENTIAL AND TRANSMISSION REPAIR STAND

DD-1014 Stand With Set C-3304 Arms for All Differentials and Transmissions.

C-3304 Set of 4 Adapter Arms to fit PowerFlite transmissions.

See Page 13 For Bench Type Swivel Stand.

An efficient stand like this holds the transmission securely at a convenient working height. It saves much valuable time usually lost "wrestling" the transmission on the floor. It encourages more accurate work and saves fatigue. Stand is rugged enough to safely service 3 and 4 ton truck differentials and transmissions.

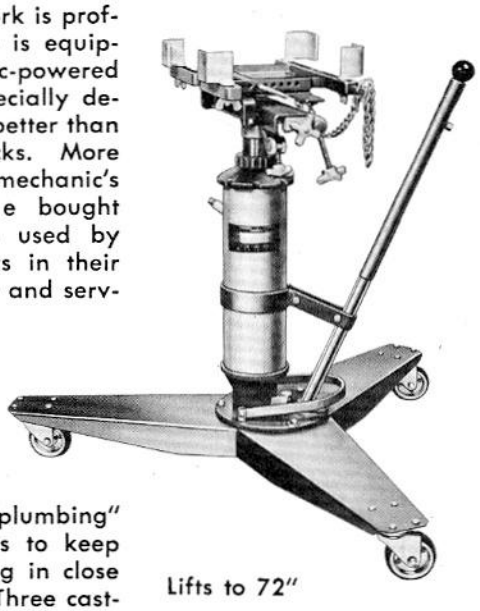


HI-LIFT TRANSMISSION SERVICE JACK

C-3203-A Jack complete with C-3502 All-Car Adapter.

Makes Transmission Changes A Fast, Safe One-Man Job On Any Car Hoist.

Transmission service work is profitable when your shop is equipped with this hydraulic-powered jack. Because it is specially designed it does its work better than made-over types of jacks. More than 250 different mechanic's training schools have bought them. They are also used by most car manufacturers in their engineering, laboratory and service departments.



Lifts to 72"
Lowers to 32"

3 Leg Base Hugs Hoist Post.

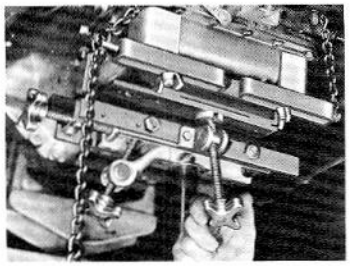
There is no outside "plumbing" or cumbersome controls to keep this jack from snuggling in close for a straight up lift. Three casters provide a safe, firm, no-wobble base, even on an uneven floor.

Conveniently Located Controls Provide Safe, Fast Raising And Lowering of Heaviest Transmissions.

All controls are within easy reach. Dual speed, foot-operated release valve lowers fast or slow as desired—it leaves both hands free to guide transmission. Above picture shows C-3487 fixture safely supporting engine while transmission is removed.

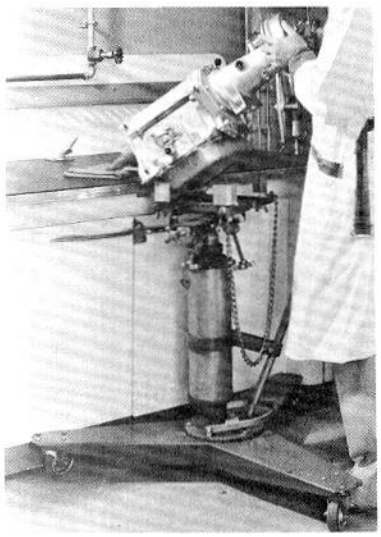
Automatic 1000 lb. Overload Valve Prevents Chance Of Accident.

A built-in safety valve releases automatically at 1000 lbs. pressure. There is no danger of accident should jack be carelessly left under car when car hoist is lowered.



3 Way Tilt Controls Make Alignment Easy.

There is no positioning problem when you use this jack. It tilts 28° forward or 10° backward, also 13° left or right, and slides laterally 3" on steel rollers.



Dual Piston Design Gives Full 72" Height— Yet Lowers to 32" For Easy Transfers To Work Bench.

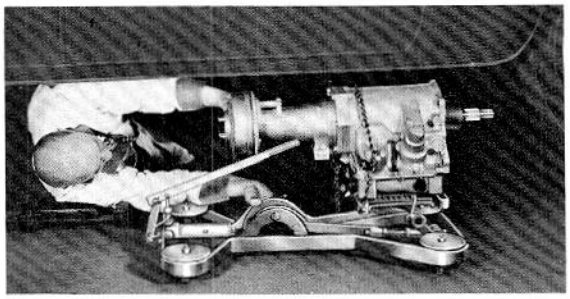
There is no need for cranes, chain falls, or back breaking lifts when you have this jack. See how conveniently it lowers to bench height for safe, sure transfer directly to bench.

Thousands In Everyday Use—Owners Wonder How They Got Along Without Them.

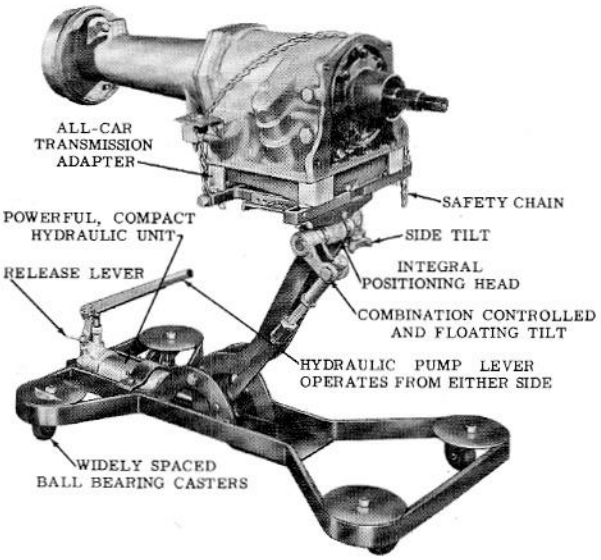
Car dealers, engineering laboratories, specialty repair shops, etc. by the thousands use these jacks for safe, fast transmission service. You need one or more to protect your men's personal safety, and to keep your shop's labor rates competitive.

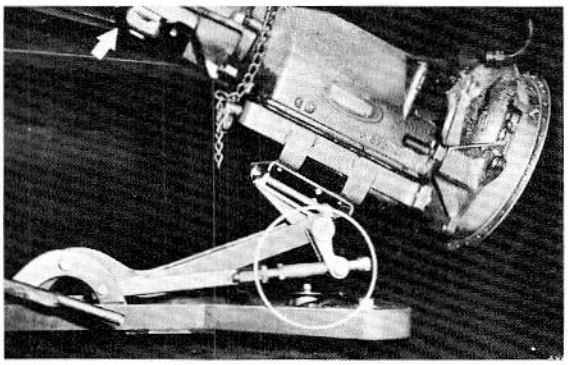
SEE PAGE 84 FOR REAR ENGINE SUPPORT FIXTURE.

Engine must be supported with special fixture before transmission can be removed.

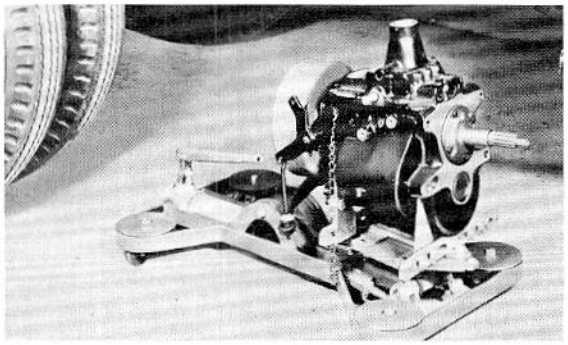


MAXIMUM EXTENDED HEIGHT — 23"
MINIMUM COLLAPSED HEIGHT — 5¾"
Capacity — 1,000 lbs.





Here you see the Lo-Jack floating tilt in action! It balances the transmission and makes it easy to clear obstructions, such as illustrated.



HYDRAULIC POWERED LO-JACK FOR CHANGING ALL MAKES OF AUTOMATIC TRANSMISSIONS

C-3201-A Lo-Jack complete with C-3502 All-Car Adapter.

Especially Designed For 2nd Floor Service Or Shops Without Hoists.

Here's a jack **engineered** for **fast,** one-man service with the car mounted on ordinary jack stands. The hydraulic pump, ram and positioning carrier are all in one unit. All controls are at an operator's finger tips for safe, fast operation from a creeper, as shown.

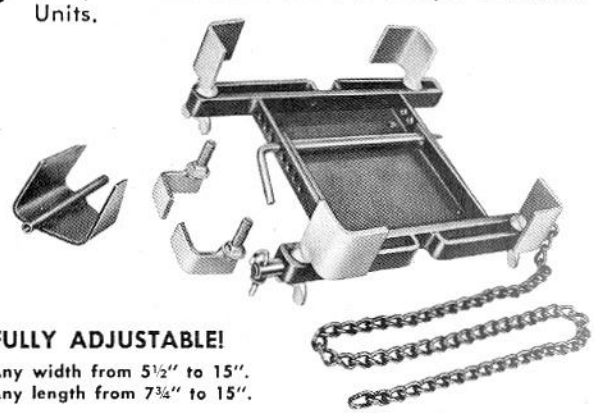
Lo-Jack Saves Labor—Prevents Costly Delays And Personal Injuries.

Safely lifts up to 1000 lbs. Has built-in, controlled, tilting mechanism that tilts 56° forward or 6° backward. It also tilts 10° left or right to make it easy to guide even the most difficult transmission into place.

NEW *ALL-CAR* ADAPTER HOLDS ANY* MAKE TRANSMISSION

C-3502 Fits all transmissions up to 500 lbs.
*Except 1950-'52 Powerglide—order C-3086.

C-3246 Adapter Holds Fluid Drive or Torque Converter Units.



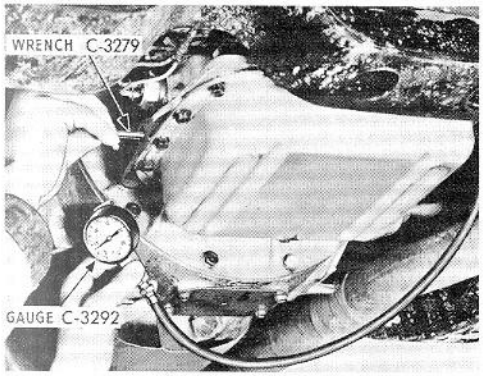
FULLY ADJUSTABLE!
Any width from 5½" to 15".
Any length from 7¾" to 15".

Order Your Jack Complete With This SINGLE Adapter That Fits All Transmissions.*

Here's the one adapter that takes the place of more than eight special adapters costing four times the price. If you now have a jack, order this new, flexible adapter to make your equipment easier to use on all cars.

LO-JACK SERVICES TRUCKS.

Your Lo-Jack will also perform heavy-duty service jobs like installing this transmission in a truck. Its four large, widely spaced casters also make it ideal to lift heavy rear axle ring gear and pinion assemblies into position. No need to return a damaged or worn jack for service. Hydraulic pump and parts are readily available for immediate service by most all major hydraulic jack service stations.



THROTTLE PRESSURE ADJUSTING WRENCH

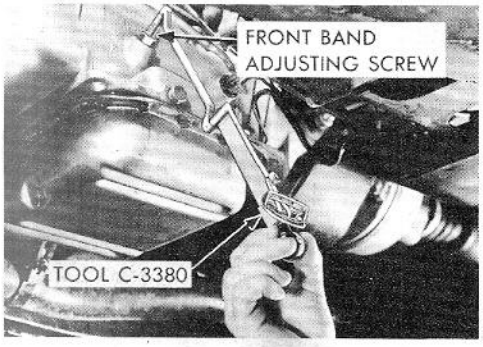
C-3279-B Single hex., fits standard and undersize screws.

No matter if you encounter a standard or one of the undersize throttle adjusting valve screws, you'll find this special wrench an essential time saver.

LOW-PRESSURE GAUGE

C-3292 Special 100 lb. pressure gauge, complete with hose and fittings.

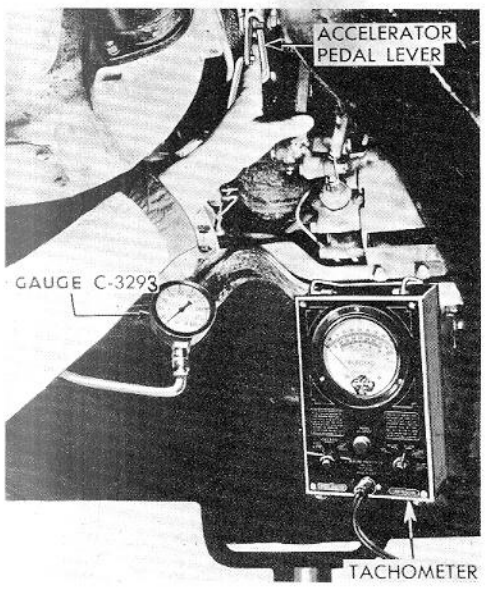
Gauge is fitted with a hanger hook that makes it easy to hang on any convenient projection. Use it with the DD-1150 Tachometer to check throttle pressure, will also indicate a sticky throttle valve. **Do not use this gauge to check main line pressure—it does not have enough capacity.**



BAND ADJUSTING TORQUE WRENCH

C-3380 Special 110 inch-pound *Sensory model. For PowerFlite and 1956 Chrysler 3 speed automatic transmission.

This special torque wrench extends past the operating controls to reach the band adjusting screw without having to remove the floor pan. A socket is supplied for squared end of screw.
The short coupled design and low range torque calibrations of this wrench provide an accurate starting point for PowerFlite band adjustments, as outlined in factory service specifications. Wrench can also be used for other similar torquing operations requiring consistent, accurate measuring.
*See page 61 for Sensory explanation.



HIGH-PRESSURE GAUGE

C-3293 Special 300 lb. pressure gauge, complete with hose and fittings. For PowerFlite and 1956 Chrysler 3 speed automatic transmission.

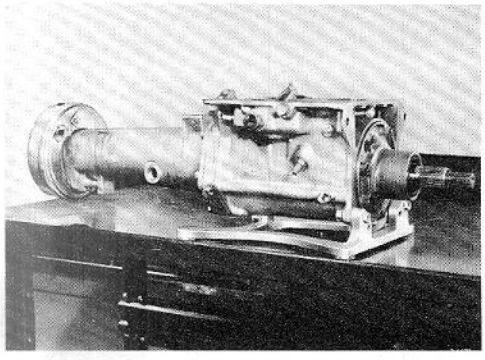
This gauge should not be confused with the C-3292 Low-Pressure Gauge that has a lower capacity with wider spaced calibrations for accurately checking low-pressures. The C-3293 High-Pressure Gauge must be used when checking line pressure with selector in reverse position.

ELECTRIC TACHOMETER

DD-1150 Has dial selector switch to provide 0 to 1000 R.P.M. and 0 to 5000 R.P.M. readings. See page 55 for additional details.

For Throttle And Linkage Adjusting.

An accurate tachometer is a "must" in making automatic Transmission throttle pressure and linkage adjustments. The DD-1150 "Tach" is a self-contained, dry cell, battery operated unit, convenient to use under the car or on a road test. Also has cam angle dwell feature plus switch for both 6 and 8 lobe cams.

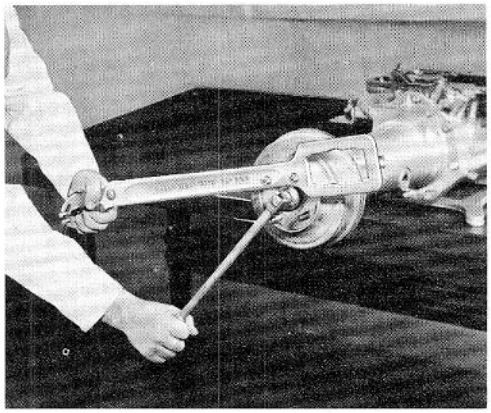


POWERFLITE REPAIR STAND

C-3280 For all PowerFlite transmissions and 1956 Chrysler 3 speed automatic transmission.

Holds Transmission For All Bench Type Services.

Here is an essential tool for all major overhaul services. It rigidly and safely supports the complete transmission in a convenient working position and need not be removed for any teardown or rebuilding operation. Speeds up all bench services by eliminating the need to "wrestle" the transmission while performing needed services.

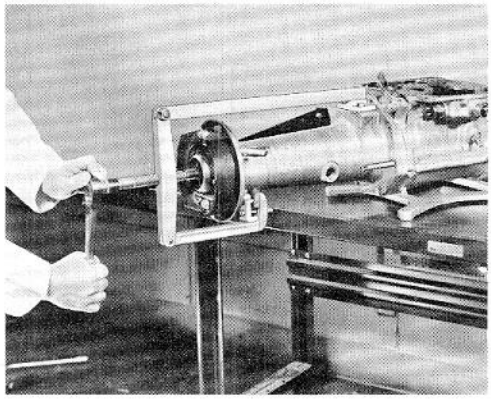


BRAKE DRUM HOLDING WRENCH

C-3281 For both yoke and flange type joints.

Wrench Is Double End To Fit Both Types Of "U" Joint Companion Flanges.

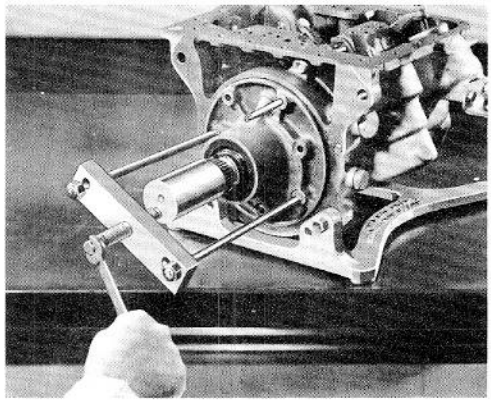
Use of this heavy-duty wrench eliminates the need of jamming a wooden handle of a hammer between the transmission gears to lock the flange while the retainer nut is removed or installed. Wrench is long enough to strike the floor and automatically hold itself in position when being used on the vehicle. Services both front and rear joints.



EXTENSION HOUSING PULLER

C-3282 Use with C-3283 Aligning Pilots.

Attempting to hammer this aluminum housing from position is almost sure to result in expensive and unnecessary damage. Puller exerts a straight direct pull and avoids cocking and damaging of the housing. Tool can be used with parking brake shoe anchor rod in or out of place.



FRONT PUMP HOUSING PULLER

C-3287 Puller, complete with special offset adapter. (Some late model PowerFlite Front Pump Housings are not tapped to receive this puller.)

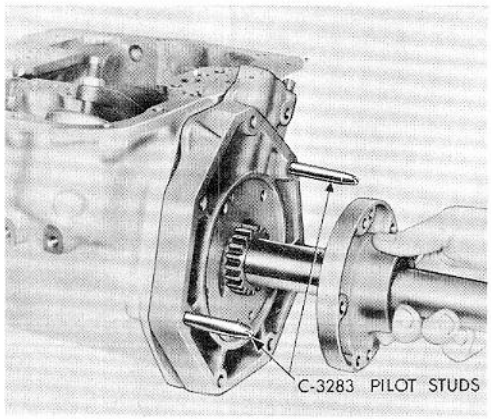
The front pump housings, plus the regulator valve body can be safely removed with this special puller. The shaft protector sleeve has two offset puller screw centering countersinks which align the puller. Puller is designed to pull straight even when installed slightly off center due to locations of threaded holes in pump housings.

FRONT PUMP HOUSING AND REGULATOR VALVE BODY PILOTS

C-3288 Pair of pilots.

Aligns Housing For Safe, Fast Removal.

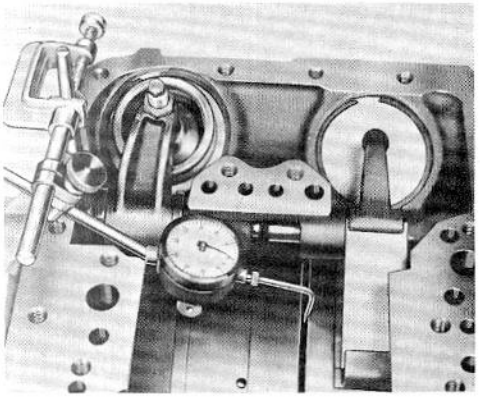
Use of these pilots will gently guide the housings into and out of position. Such aligning helps avoid the need of forcing the housings into place.



OUTPUT SHAFT SUPPORT PLATE AND EXTENSION HOUSING ALIGNING PILOTS

C-3283 Pair of pilots. For PowerFlite and 1956 Chrysler 3 speed automatic transmission.

Use of these special guide pilots will automatically align the output shaft support while it is being removed or installed. These pilots are used in pairs and also guide other similar close fitting units into their proper location without damage.

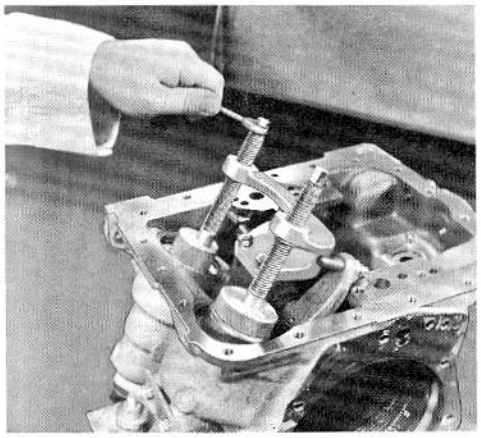


POWER TRAIN END PLAY CHECKING DIAL INDICATOR SET

C-3339 Indicator Set includes SP-1917 Special Anvil. For PowerFlite and 1956 Chrysler 3 speed automatic transmission.

SP-1917 Special Anvil Only.

Illustrated at left is the factory recommended method of accurately checking the amount of end play in the built-up power train. Owners of Miller C-430 Dial Indicator Sets need order only the SP-1917 Special Anvil. (C-430 Indicator Set discontinued—order C-3339.)



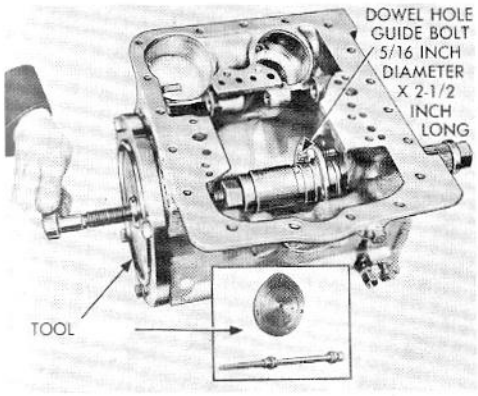
C-3529

SERVO SPRING COMPRESSOR

C-3529 May be used with PowerFlite or 1956 Chrysler 3 speed automatic transmission in or out of car. (Supersedes C-3289)

Compresses* BOTH *Springs at* SINGLE *Setting.

There is no need to remove the transmission from the vehicle to replace snap rings, seals, pistons, etc., when you have this tool to compress the kickdown and reverse servo pistons. Compressor securely bolts to transmission case to provide a firm, safe anchor for holding both springs compressed at the same time.



C-3531

REACTION SHAFT REMOVER AND INSTALLER

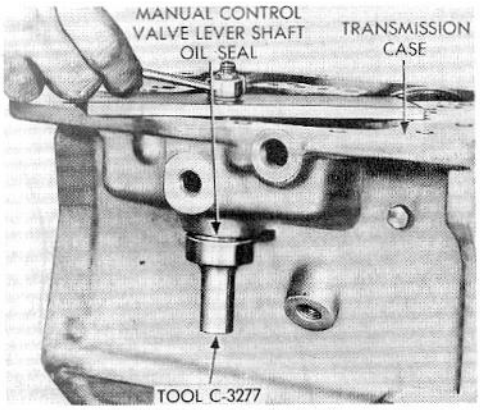
C-3531 Includes compression screw and locating flange. For PowerFlite and 1956 Chrysler 3 speed automatic transmissions. (Supersedes C-3297. C-3297 can be modernized to C-3531 with Kit C-3535).

There is no need for attempting to hammer the reaction shaft from the transmission case if you have this tool. The large flange portion of the tool bolts to the transmission case and acts as an anchor for the main screw. Centering adapters and a thrust bearing protect the reaction shaft as it is removed or installed in the case. Use guide bolt as indicated to properly relocate shaft in case.

OVER-RUNNING CLUTCH SPRING AND ROLLER INSTALLING AND ASSEMBLY GAUGE

C-3527 For 1956 Chrysler 3 Speed Automatic Transmission.

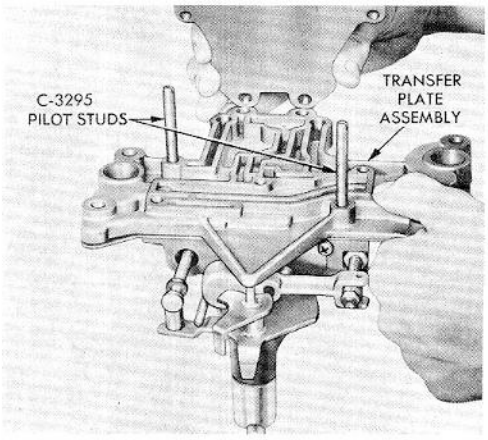
Gauge is essential for properly assembling springs and rollers in over-running clutch housing. Gauge is then imperative to allow the assembled clutch to be installed to the over-running clutch cam. This vital assembly operation is impossible without this gauge.



MANUAL CONTROL VALVE LEVER SHAFT OIL SEAL INSTALLER

C-3277 Tool, complete with aligning plate.

This inexpensive tool will be a good investment to assure safe, leakproof installation of this vital seal. Attempting to drive this seal into position by makeshift hammer and punch methods, can ruin an otherwise successful PowerFlite overhaul job. Aligning plate allows seal to be safely drawn into position, as shown.



VALVE BODY AND TRANSFER PLATE ALIGNING PILOTS

C-3295 Pair of pilots.

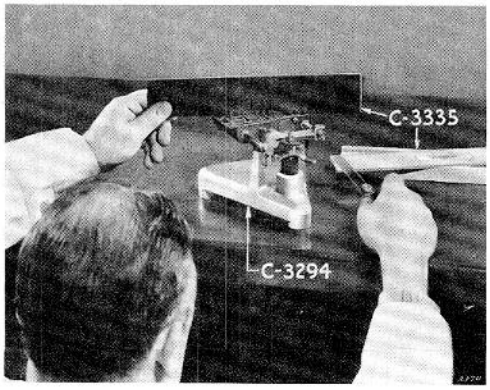
These pilot studs are similar to the C-3283 Set but a different size to safely guide the valve body to transfer plate for removal and assembly. They need only be installed finger tight but have a screw driver slot or wrench flat machined into them should they be too tight to remove by hand.

VALVE BODY REPAIR STAND

C-3294 Made of aluminum to prevent burring or marking of valve body. For PowerFlite transmissions.

C-3528 For 1956 Chrysler 3 speed automatic transmission.

Every care should be taken to protect the valve body when it is removed from the transmission. This stand keeps it off the bench and properly supported to prevent warpage.

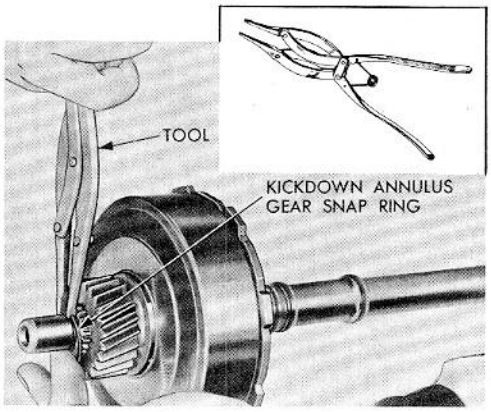


SPECIAL STRAIGHT EDGE

C-3335 Straight Edge supplied in fitted wooden protector case. For PowerFlite and 1956 Chrysler 3 speed automatic transmission.

Checks Valve Body For Burrs And Warpage.

A dependable, accurate, straight edge should be part of every PowerFlite mechanic's tool kit. Keeping it exclusively for this service will be a good investment.

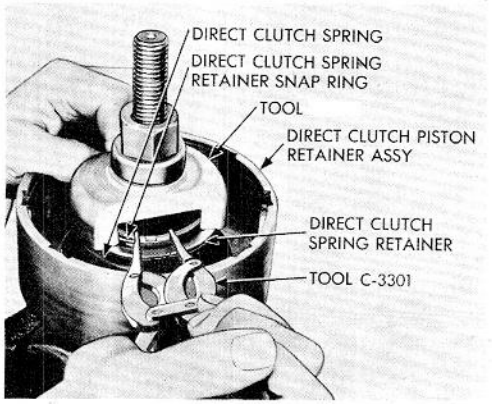


SNAP RING PLIERS

C-3301 Essential for all transmission service.

Parallel Opening Jaws Hold Ring More Securely Than Ordinary Pliers.

The illustration at the left shows only one important use of these unusual pliers—they are also essential to service several other PowerFlite snap rings. **Only one set is included in the PowerFlite Essential Tool Set—order additional pairs for each of your PowerFlite mechanics.**

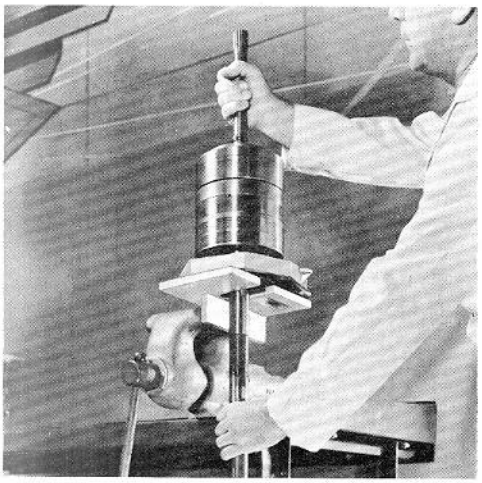


CLUTCH SPRING COMPRESSOR AND CLUTCH DISC ASSEMBLY GAUGE

C-3533 For Powerflite and 1956 Chrysler 3 Speed Automatic Transmission.

Single Tool Performs Four Services.

Special machining allows this one tool to compress the direct clutch spring on PowerFlite transmissions. It also compresses the front and rear clutch piston return springs on the 3 Speed Automatic transmissions. Factory service specifications also show how this tool is used to measure and select the proper clutch disc on 3 Speed transmissions.

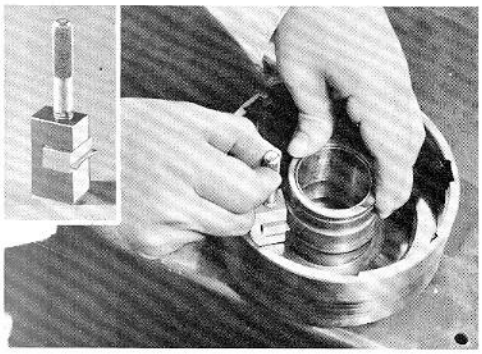


SHAFT SUPPORT FIXTURE

C-3285 For all PowerFlite Transmissions.

Fixture Clamps in Ordinary Bench Vise For Easily Assembling Power Train.

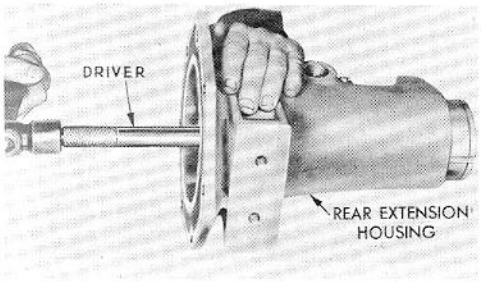
Assembly of all the various parts that make up the power train assembly is easier and safer when you have this special fixture. It clamps in any ordinary vise as illustrated and forms a convenient holding jig on which to build up the complete power train unit.



PISTON SEAL RING REMOVER AND INSTALLER

C-3286 For all PowerFlite Transmissions.

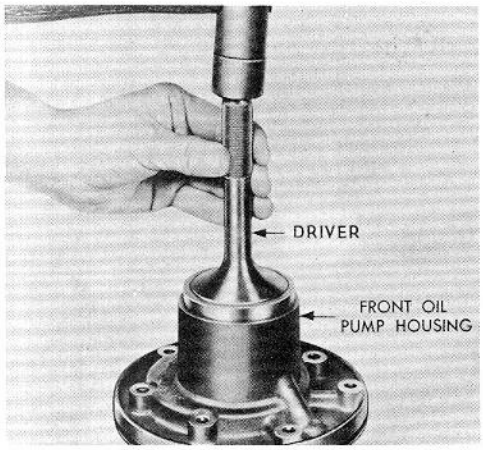
This special tool can save a great deal of time when removing and installing the seal ring on the direct clutch piston retainer. Install tool to press in on ring directly to one side of ring break. Other end of ring will then be free to open as ring is pressed into groove with thumb opposite tool, and free end of ring is flipped from its locked position with a knife blade or sharpened brass wire. Use tool similarly to install new ring.



EXTENSION HOUSING BEARING REMOVING DRIVER

C-3275 For all PowerFlite Transmissions and 1956 Chrysler 3 speed Automatic Transmission.

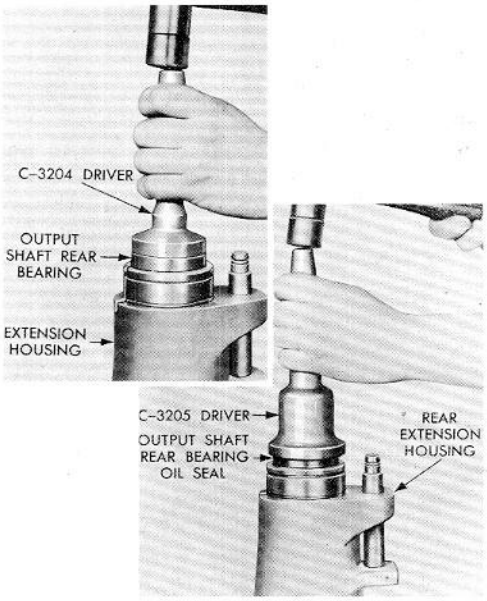
Attempting to remove the output shaft rear bearing from the aluminum extension housing with a hammer and punch can bellmouth the bearing bore, requiring the replacement of the housing. Safeguard this important transmission part by safely removing this bearing with the C-3275 Driver.



FRONT PUMP HOUSING DUST SEAL INSTALLING DRIVER

C-3278 For all PowerFlite Transmissions and 1956 Chrysler 3 speed automatic transmission.

The front pump housing dust seal is a vitally important part that safeguards all of the inner precision parts. Be sure to use this special driver and exceptional care when replacing this important seal—improper installation of this seal can cause expensive repairs later on.



OUTPUT SHAFT REAR BEARING INSTALLING DRIVER

C-3204 For all PowerFlite Transmissions and 1956 Chrysler 3 speed Automatic Transmission.

Same Driver Also Used On Overdrive Units.

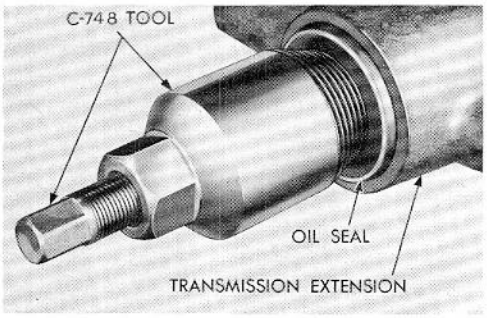
This is the same driver used to install the rear bearings in the Overdrive Housing. Use this special driver and care when installing the output shaft bearing in the aluminum extension housing, and avoid irreparable damage to the housing.

OUTPUT SHAFT OIL SEAL INSTALLING DRIVER

C-3205 For all PowerFlite Transmissions and 1956 Chrysler 3 speed Automatic transmission.

This Driver Also Installs Seals In Hydraulically-Operated Transmissions.

This driver is also used to install the latest type ½" thick rear oil seal on 1952 and 1953 Hydraulically-operated Transmissions. Some shops may, therefore, need two of these drivers—one for each section of their shop.

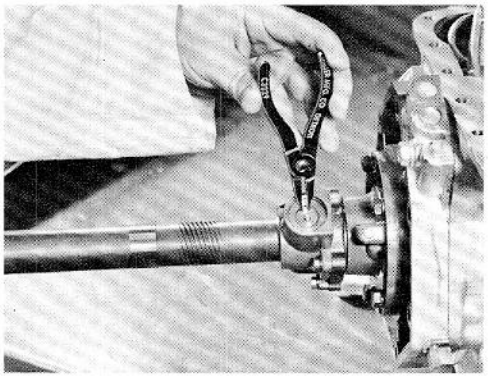


OUTPUT SHAFT OIL SEAL PULLER

C-748 See page 8 for other seals serviced by this tool.

This Popular Size Pulls Several Different Seals.

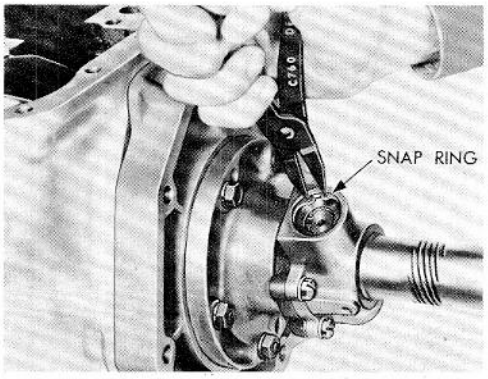
This is the same size puller used to remove Plymouth pinion oil seals. Because this puller is used in brake and rear axle service, most shops use several. An extra one in your PowerFlite service department will assure it being available when needed.



GOVERNOR SECONDARY WEIGHT AND SERVO PISTON VALVE SPRING SNAP RING PLIERS

C-3229 Special for Truarc snap rings. For PowerFlite and 1956 Chrysler 3 speed Automatic transmission.

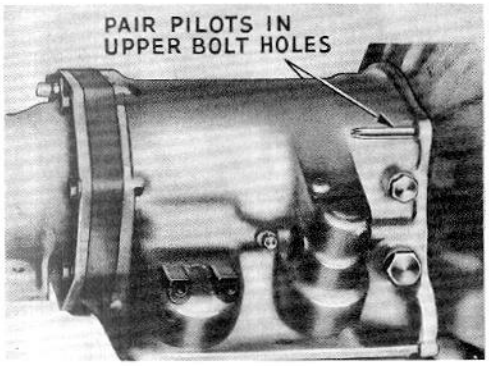
The thin, slightly hooked nose ends of these pliers make them favorites with mechanics removing and installing the popular Truarc snap ring. Order several pairs—they are inexpensive and designed to be expendable.



GOVERNOR WEIGHT SNAP RING PLIERS

C-760 Special for Truarc snap rings. For PowerFlite and 1956 Chrysler 3 speed Automatic transmission.

Like the C-3229 Pliers, this pair, too, is especially designed to quickly remove and install its particular size of Truarc snap ring that has two small holes in each end. Regular needle nose pliers have straight ends and drop these rings, often causing annoying loss of valuable time and parts.



TRANSMISSION TO CONVERTER ALIGNMENT PILOTS

C-3276 Pair of Pilots. For PowerFlite and 1956 Chrysler 3 speed automatic transmission.

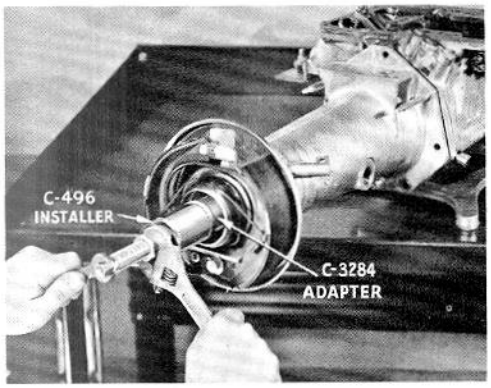
Assembly of the PowerFlite Transmission into the vehicle can be made a great deal easier through the use of this inexpensive pair of guide pilots. They screw into the torque converter adapter plate and guide the transmission case into place. Do not allow full weight of transmission to bear on guide pilots. Use pilots in two upper bolt holes.

EXTENSION HOUSING INSTALLING ADAPTER

C-3284 Allows C-496 to perform extra service.

Use With C-496 Universal Joint Installer.

This inexpensive adapter saves the need of buying a completely new tool to safely install the extension housing. If you do not have a C-496 puller, be sure to order it with the C-3284 adapter.



UNIVERSAL JOINT INSTALLER

C-496 Dual purpose tool.

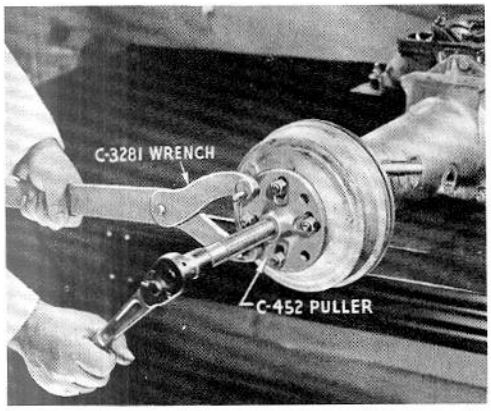
Tool threads onto end of output shaft to provide a secure anchor from which to safely push housing in place with a C-3284 Adapter as shown. Eliminates need of attempting to hammer housing into position.

PARKING BRAKE DRUM PULLER

C-452 Has multiple sets of adapter holes to fit various sizes of flanges. For PowerFlite and 1956 Chrysler 3 speed Automatic Transmission.

C-3281 Wrench Safely Holds Drum From Turning.

Pictured here is the safe, easy way to pull the parking brake drum. The C-452 Puller bolts securely to the drum with its puller screw exerting pressure safely against the output shaft.



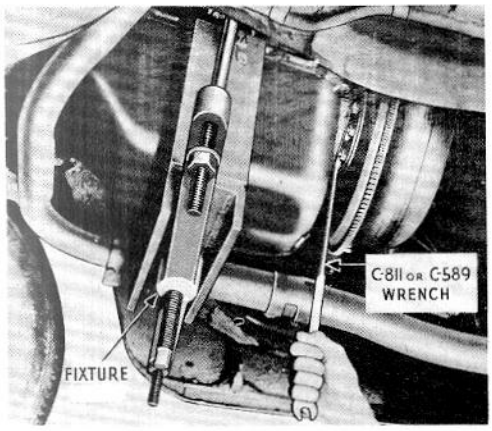
CONVERTER TO CRANKSHAFT ATTACHING STUD NUT WRENCHES

C-589 Fits 5/8" hex. nuts.

C-811 Fits 11/16" hex. nuts.

Same Wrenches As Used For Removing Torque Converters And Fluid Drives.

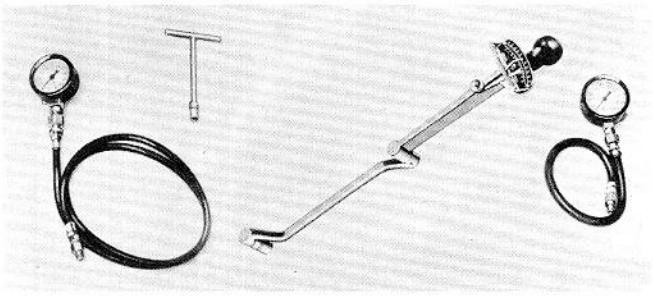
Note the twisted handle design—an exclusive Miller feature. This twist allows the wrench to begin flexing at its maximum safe torque and automatically warns the mechanic the nut is fully tightened. Wrench flexes at approximately 70 foot-pounds—factory requires these nuts to be torqued to 55 to 60 foot-pounds.



ENGINE SUPPORT FIXTURE

C-3487 New wider design to fit 1955 models with wider frames and offset engine centerlines. See page 84 for additional details. For PowerFlite and 1956 Chrysler 3 speed automatic transmission.

Fixture safely supports the engine from the engine oil pan flange. It is a self-contained screw jack type that allows the car to be taken off the hoist and parked while bench repairs are made, thus avoids tying up a hoist unnecessarily.

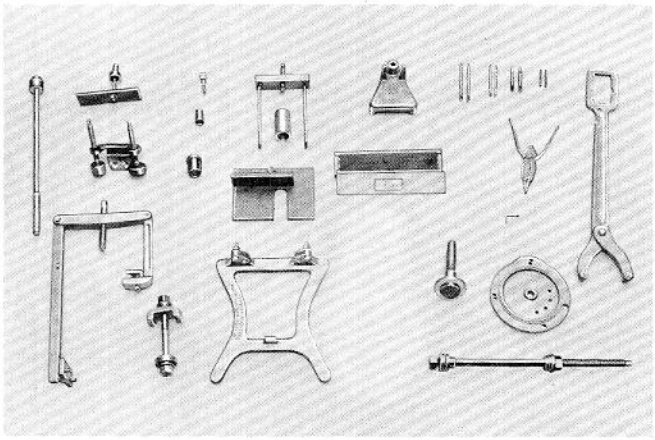


POWERFLITE NEW CAR INSPECTION TOOL SET

C-3381 Set of 4 essential pre-delivery tools. Contains following special tools:

C-3380 Band Adjusting Wrench.
C-3279-B Throttle Pressure Adjusting Screw Wrench.
C-3292 Low-Pressure Gauge for Throttle Adjustments.
C-3293 High-Pressure Gauge for Checking Main Line Pressures.

Where new car preparation work is performed in a separate location, an extra set of these tools should be provided to assure accurate, dependable PowerFlite performance as an essential part of new car pre-delivery service.



POWERFLITE MAINTENANCE AND OVERHAUL TOOL SET

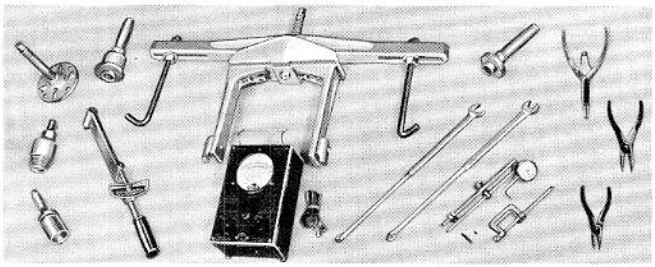
C-3343 Set of 21 overhaul tools.

BOTH C-3381 and C-3343 Sets Are Needed For Powerflite Service.

Services other than those involved in new car inspection and delivery recommendations, should not be attempted unless the complete C-3343 Tool Set is available. The combined C-3381 and C-3343 Sets can be ordered under Set C-3386A. C-3343 Set contains the following special tools:

C-3275 **DRIVER**—Bearing from Trans. Extension
C-3276 **PILOTS**—(pr.) Trans. to Torque Converter Adapter Plate
C-3277 **INSTALLER**—Manual Valve Lever Shaft Oil Seal
C-3278 **DRIVER**—Front Pump Housing Dust Seal
C-3280 **STAND**—Trans. Repair (Bench Type)
C-3281 **WRENCH**—Flange Holding
C-3282 **REMOVER**—Ext. Housing and Brg. Assembly
C-3283 **PILOTS**—(pr.) Ext. Housing to Trans. Case
C-3284 **ADAPTER**—For C-496 U Joint Flange Installer
C-3285 **FIXTURE**—PowerFlite Trans. Output Shaft Support
C-3286 **TOOL**—Removing and Installing PowerFlite Trans. Direct Clutch Piston Retainer Seal Ring

C-3287 **PULLER**—Front Pump Housing and Regulator Valve Body
C-3288 **PILOTS**—(pr.) Pump Housing and Regulator Valve Body
C-3529 **FIXTURE**—Compressing Servo Springs
C-3294 **STAND**—Valve Body Repair and Assembly
C-3295 **PILOTS**—(pr.) Valve Body and Transfer Plate
C-3531 **TOOL**—Remover and Installer Reaction Shaft
C-3301 **PLIERS**—Snap Ring (Parallel Jaw Type)
C-3302 **COMPRESSOR**—PowerFlite Trans. Clutch Spring
C-3335 **STRAIGHT EDGE**—10" in Wooden Case
SP-1917 **ANVIL AND LOCK NUT**—For C-430 Indicator Set—For Checking Power Train End Play

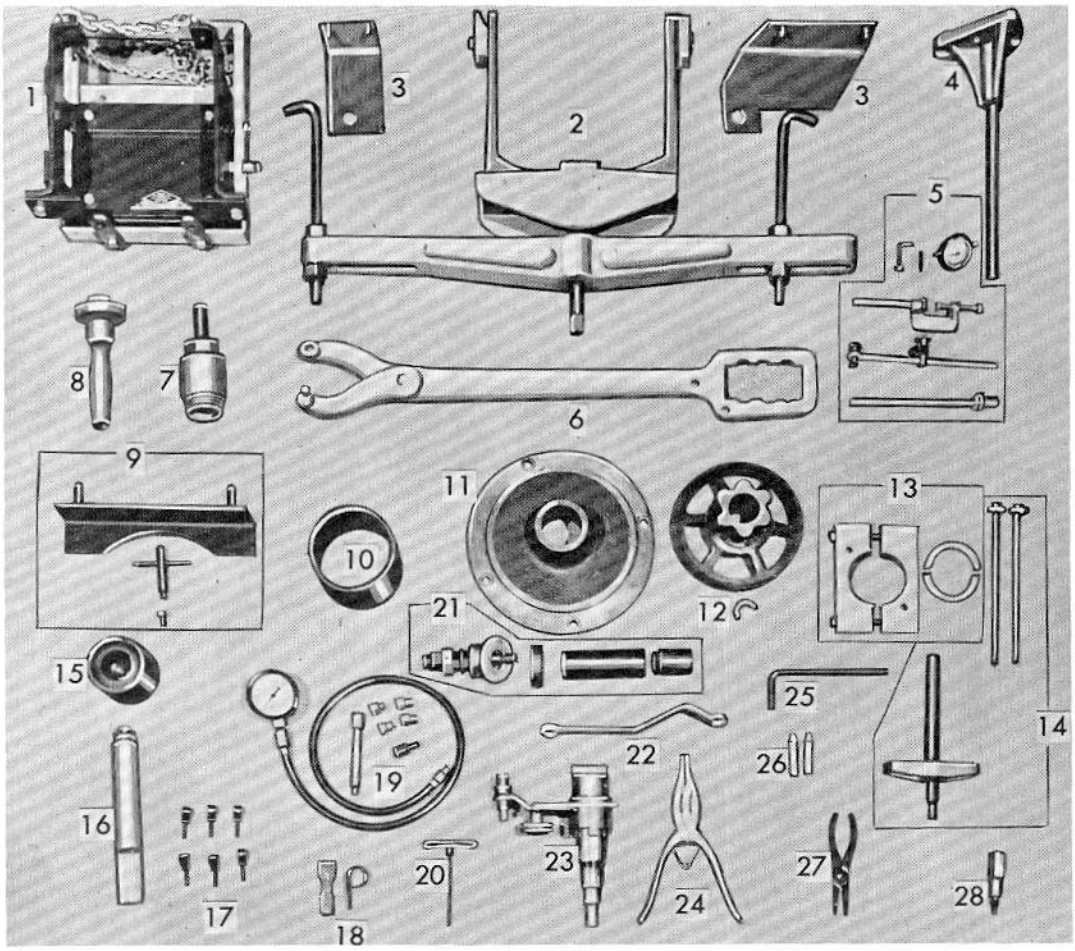


DUAL PURPOSE TOOLS ALSO NEEDED TO SUPPLEMENT SPECIAL POWERFLITE TOOLS FOR COMPLETE SERVICE

All of the following tools are also essential for other services. See index for page numbers giving details about each tool.

C-452 **PULLER**—Universal Joint Flange
C-484 **PLIERS**—Snap Ring—Removing Servo Body
C-496 **TOOL**—Universal Joint Flange Installing
C-589 **WRENCH**—Converter to Crankshaft Stud Nut—5/8" hex.
C-748 **PULLER**—Output Shaft Rear Bearing Oil Seal
C-760 **PLIERS**—Governor Weight Snap Ring
C-811 **WRENCH**—Converter to Crankshaft Stud Nut—11/16" hex.
DD-1150 **TACHOMETER**—For Throttle and Linkage Adjusting

C-3005 **Wrench**—100 Foot-Pound Torque—(Sensory Type)
C-3204 **DRIVER**—Output Shaft Rear Bearing
C-3205 **DRIVER**—Output Shaft Rear Bearing Oil Seal
C-3229 **PLIERS**—Governor Secondary Weight and Servo Piston Valve Spring Snap Ring
C-3339 **SET**—Dial Indicator, Clamp, Swivel and Attaching Rods
C-3487 **FIXTURE**—Engine Support



SUPER TRUCK-O-MATIC TRANSMISSION SPECIAL SERVICE TOOLS

(1) **C-3502 ADAPTER**—Transmission Holding (Use with C-3201-A or C-3203-A Hydraulic Jacks—See Pages 120 and 121)

(2) **C-3487 FIXTURE**—Engine Support (See Page 84)

(3) **DD-1223 ADAPTER**—Engine Support Fixture (Left and Right) DD-1226 Is Combination of C-3487 Engine Support Fixture and DD-1223 Pair of Adapters

(4) **C-870 FIXTURE**—Converter Housing Alignment Checking

(5) **C-3339 SET**—Dial Indicator, Clamp, Swivel and Attaching Rods (Use with C-870)

(6) **C-3281 WRENCH**—Companion Flange Holding (See Page 10)

(7) **C-748 PULLER**—Extension Case Oil Seal (See Page 8)

(8) **C-3204 DRIVER**—Extension Case Bearing (See Page 116)

(9) **DD-1219 FIXTURE**—Transmission Holding

(10) **DD-1216 SLEEVE**—Multiple Disc Clutch

(11) **DD-1215 FLANGE**—Converter Alignment

(12) **DD-1213 CLIP**—Thrust Washer Gauge and Spline Locking

(13) **DD-1222 ADAPTER**—Rear Mainshaft Bearing Puller

(14) **DD-1221 PULLER**—Rear Mainshaft Bearing

(15) **DD-1202 REPLACER**—Extension Case Oil Seal

(16) **DD-1203 HANDLE**—Extension Case Oil Seal Replacer Driver

(17) **DD-1220 PINS**—Multiple Disc Clutch Piston Ring Installer

(18) **DD-1211 UNLOADER**—Valve Spring

(19) **DD-1205 GAUGE SET**—Transmission Pressure

(20) **DD-1218 WRENCH**—Governor Shaft Set Screw

(21) **DD-1204 PUSHER**—Companion Flange and Mainshaft Bearing

(22) **DD-1209 WRENCH**—Converter Screw

(23) **DD-1206 FIXTURE**—Spline Alignment

(24) **C-3301 PLIERS**—Snap Ring (See Page 125)

(25) **DD-1217 ROD**—Lubrication Valve Assembly Test

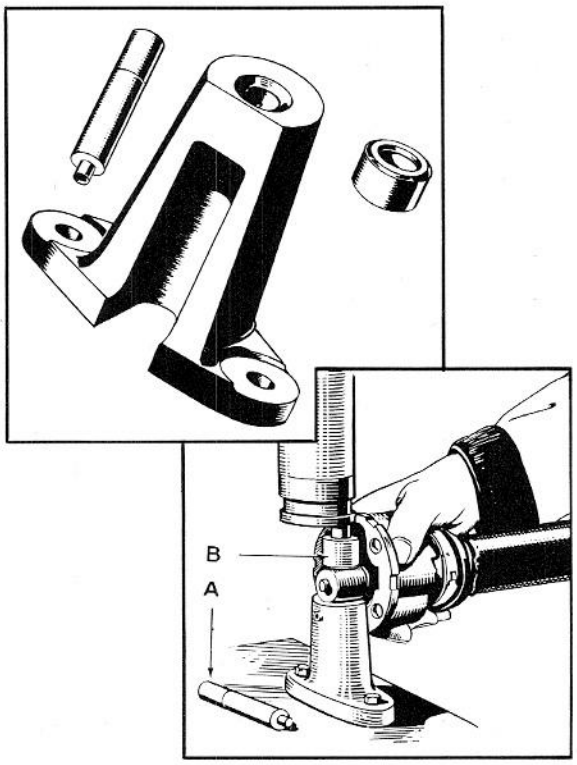
(26) **DD-1207 STUDS**—Transmission Pilot (2)

(27) **DD-1214 PLIERS**—Snap Ring (External Truarc)

(28) **DD-1208 TOOL**—Band Adjusting

C-452 PULLER—Universal Joint Flange (Not Shown Above—See Page 128)

C-860 REAMER — Dowel Pin Hole (Not Shown Above—See Page 44)



UNIVERSAL JOINT TRUNNION PIN REMOVING AND INSTALLING JIGS

C-552 For small size joints used on all Plymouth cars. Also services Chrysler, DeSoto and Dodge cars up to 1953.

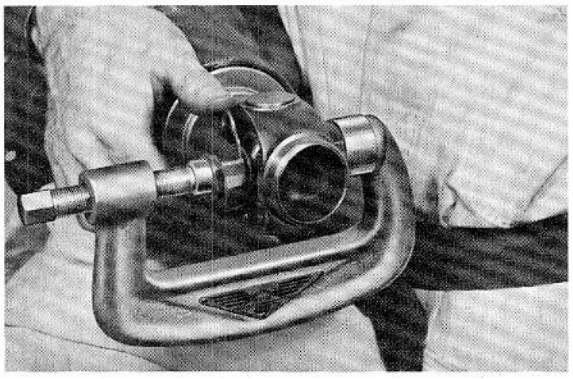
C-3271 For 1953 thru 1956 Chrysler and DeSoto V-8's equipped with torque converters, except models covered by C-3534.

C-3313 For new cylindrical ball end and trunnion type joint used on 1953 thru 1956 Dodge cars equipped with torque converters.

C-3534 For 1956 Chrysler Windsor, DeSoto Fire Dome and Dodge Royals. Owners of C-3271 need order only the SP-2882 Pin and SP-2884 Bushing.

Makes It Easy To Replace Pins On Your Arbor Press—Special Spacer Helps Assure Perfect Balance.

Each jig is supplied complete with pilot pin (A) and equalizing spacer bushing (B). The heat-treated chrome alloy steel casting is designed to effectively stand up under the terrifically high pressures required to remove worn pins. The flat face of the jig provides a necessary and convenient shoulder against which the joint housing can be pressed, while compressing the joint spring in order to expose the trunnion pin, as shown.

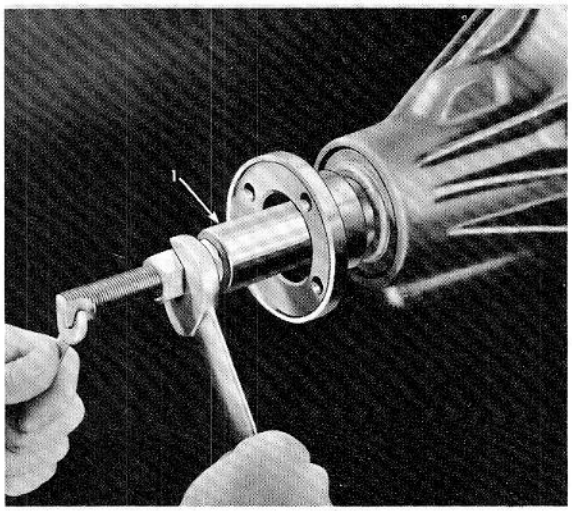


UNIVERSAL JOINT DISASSEMBLY AND ASSEMBLY TOOL

C-3056 For Chryslers with full yoke type "U" Joints.

Use Puller C-410 To Remove Full Yoke Type U Joint Flange.

Considerable pressure is required to allow the bearing assembly of this joint to be taken apart for inspection or replacement. This special tool can be used to compress the assembly and leave both hands free to remove or install the lock ring as illustrated. See page 101 for C-410 picture.

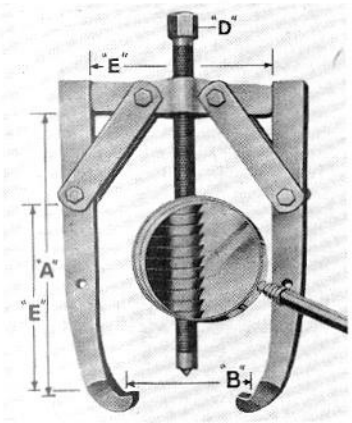


UNIVERSAL JOINT FLANGE INSTALLING TOOL

C-496 For all Plymouth, Dodge, DeSoto and Chrysler cars, also light Dodge trucks.

Eliminates Need To Drive Flange In Place—Avoids Damage To Gears.

This tool threads onto the end of either the pinion or transmission shaft and provides a safe positive method of pushing the "U" joint flange securely in place. The use of this tool prevents any damage to gear teeth and bearings while installing these flanges. Driving the flanges in place transfers the full weight and shock of the hammer blows to the transmission or rear axle gears and bearings.



2 JAW UNIVERSAL PULLER

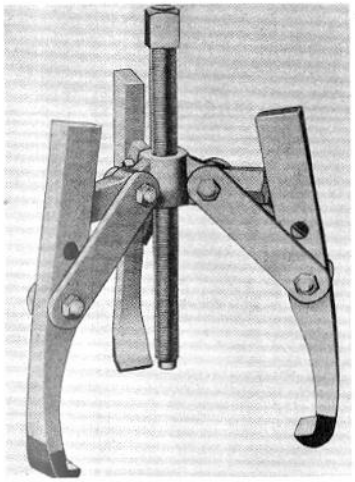
Equipped With Buttress Thread Power Screws— Wide Range Of Sizes Cover Every Need.

The thin jaws, special gripping feature and great strength makes these pullers extremely versatile and universal. Linkage design makes them quickly adjustable to a wide variety of pulling jobs.

SPECIFICATIONS

OTC Grip-o-matic Puller No.	"A" Max. Reach	"B" Max. Spread	"C" Length and Diameter of Forcing Screw	"D" Size of Forcing Screw Head	"E" Length of Head Nut	"F" Reach	Approx. Capacity in Tons
1000½-L	3⅛"	0" to 4"	⅜" x 4⅞"	½" Sq.	2¼"	2¼"	—
***1001**	3¼"	0" to 6"	9/16" x 6"	⅝" Sq.	3"	1¾"	5
1001-L	5½"	0" to 7"	9/16" x 6"	⅝" Sq.	3"	4"	5
***1002**	5½"	0" to 8"	11/16" x 9"	¾" Sq.	4 5/16"	3¾"	9
1002-L	8½"	0" to 10"	11/16" x 9"	¾" Sq.	4 5/16"	7¼"	9
1003	10"	0" to 12"	13/16" x 12"	⅞" Sq.	6 5/16"	7"	15
1003-L	15"	0" to 14"	13/16" x 12"	⅞" Sq.	6 5/16"	12⅛"	15
1003½	14"	0" to 14"	1" x 13½"	1¼" Hex.	9"	10¼"	22
1003½-L	18"	0" to 16"	1" x 13½"	1¼" Hex.	9"	14⅝"	22
1004	15½"	0" to 16"	1¼" x 15"	1⅜" Hex.	11"	9⅛"	28
1004-L	22"	0" to 20"	1¼" x 15"	1⅜" Hex.	11"	16"	28
1005	21½"	0" to 20"	1½" x 15"	1⅜" Hex.	11"	15"	35
1005-L	28"	0" to 26"	1½" x 15"	1⅜" Hex.	11"	21"	35
1006	24"	0" to 30"	2" x 18"	2⅜" Hex.	16"	17"	50
1006-L	36"	0" to 36"	2" x 18"	2⅜" Hex.	16"	29"	50

*With double-end reversible arms.



3 JAW UNIVERSAL PULLERS

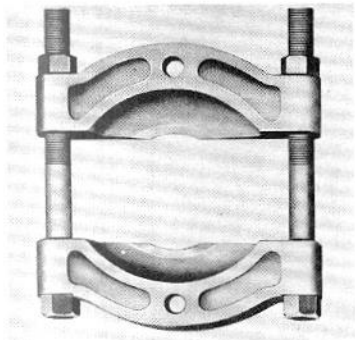
Provide The Power And Range To Safely Pull All Sizes Gears—Pulleys—Flywheels, Etc.

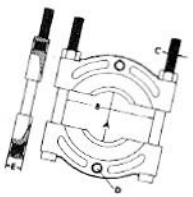
These triple grip pullers operate on the same principle as the two arm pullers illustrated and described above. Safe and will not slip off the work because The Tougher The Pull The Harder They Grip. Owners of two arm pullers need only purchase the 3-way forged head and one arm assembly.

SPECIFICATIONS

3-Arm Grip-o-matic No.	"A" Max. Reach	"B" Max. Spread of Arms	"C" Length and Diameter of Screw	"D" Size of Screw Head	Capacity in Tons
***1011**	3¼"	0" to 6"	9/16" x 6"	⅝" Sq.	6
1011-L	5½"	0" to 8"	9/16" x 6"	⅝" Sq.	6
***1012**	5½"	0" to 8"	11/16" x 9"	¾" Sq.	9
1012-L	8½"	0" to 10"	11/16" x 9"	¾" Sq.	9
1013	10"	0" to 12"	13/16" x 12"	⅞" Sq.	15
1013-L	15"	0" to 14"	13/16" x 12"	⅞" Sq.	15
1013½	14"	0" to 14"	1" x 13½"	1¼" Hex.	22
1013½-L	18"	0" to 16"	1" x 13½"	1¼" Hex.	22
1014	15½"	0" to 16"	1¼" x 15"	1⅜" Hex.	28
1014-L	22"	0" to 20"	1¼" x 15"	1⅜" Hex.	28
1015	21½"	0" to 20"	1½" x 15"	1⅞" Hex.	35
1015-L	28"	0" to 26"	1½" x 15"	1⅞" Hex.	35
1016	24"	0" to 30"	2" x 18"	2⅜" Hex.	50
1016-L	36"	0" to 36"	2" x 18"	2⅜" Hex.	50

*Double-end, reversible arms.





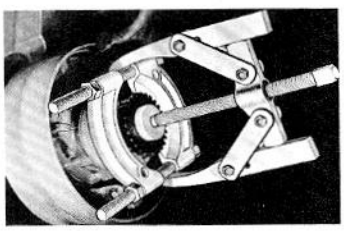
BEARING PULLING ATTACHMENTS

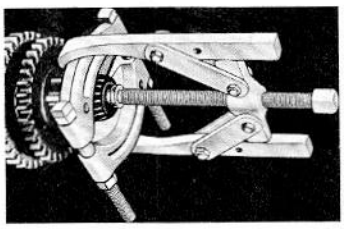
May Be Used With 2 Jaw Universal Pullers Or In Arbor Presses Or Push Pullers. (see below)

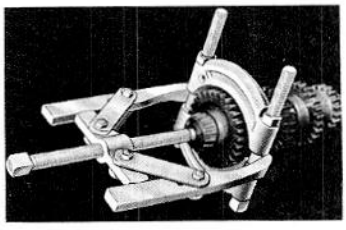
A wide range of sizes available for all bearing pulling jobs. The knife-like jaws of these tools can be forced behind bearings, gears and other tightly fitted parts where space does not permit use of hook type legs.

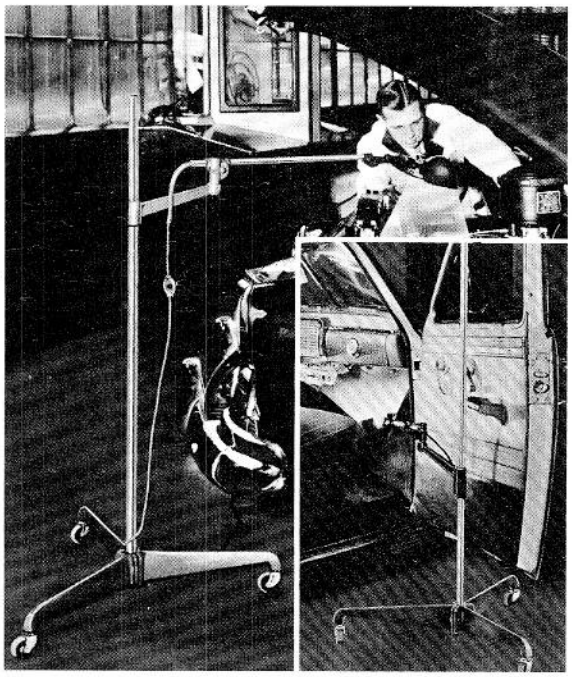
Tool No.	"A" Max.	"A" Min.	"B"	"C"	"D"	"E"	Wt. in Lbs.	Use with Grip-o-matic No.	Use with Push-Puller No.
950	2¼"	0"	2¼"	7/16"	⅜"–16	⅝"	1¼	1001–1002	515
951	4¼"	0"	4¼"	⅝"	⅝"–18	15/16"	5	1002–1003	927–930
952	5¾"	1"	6"	¾"	⅝"–18	1¼"	11	1003–1003½	930–938
952-A	9"	1"	6"	¾"	⅝"–18	1¼"	12	1003–1003½	930–938
952-D	7½"	1"	7⅛"	⅞"	1"–14	1⅜"	19¾	1003½–1004	938-P–939
953	9"	1"	10"	1⅛"	1"–14	1⅞"	41¾	1004–1005	939
953-C	12½"	5¾"	13"	1½"	1¾"–12	2¼"	100	1005–1006	939–939½
953-D	16"	6¾"	16¼"	1¾"	1¾"–12	2¾"	197	1006–1006-L	939½

Here's How Bearing Pulling Attachments Can Adapt Standard Pullers To Perform Special Jobs!









3 PORTABLE LIGHTS NEEDED BY EVERY SHOP

They're Heavy-Duty Lights Designed Especially For Automotive Service Shops.

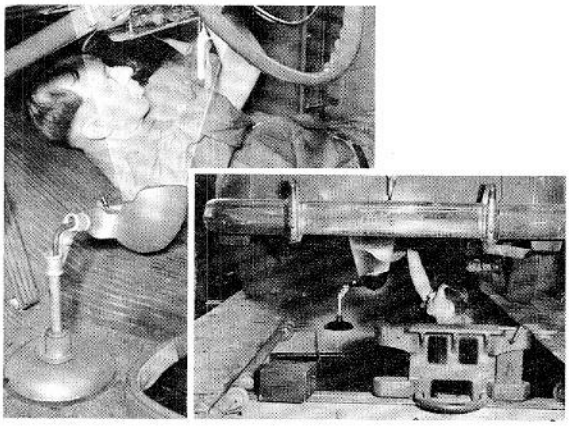
They Will:—

Direct the light where you want it and keep it there. Permit quick, positive adjustments to any position or angle. . . . No slipping.
Horizontal arm has automatic spring tension, movable up and down the vertical pipe with ease.
More convenient to use. . . . No hooks. . . . No clamps.
Sturdily constructed. . . . Safer to use . . . Will last for years.

C-684 FLOOR TYPE MECHANIC'S LIGHT

SPECIFICATIONS

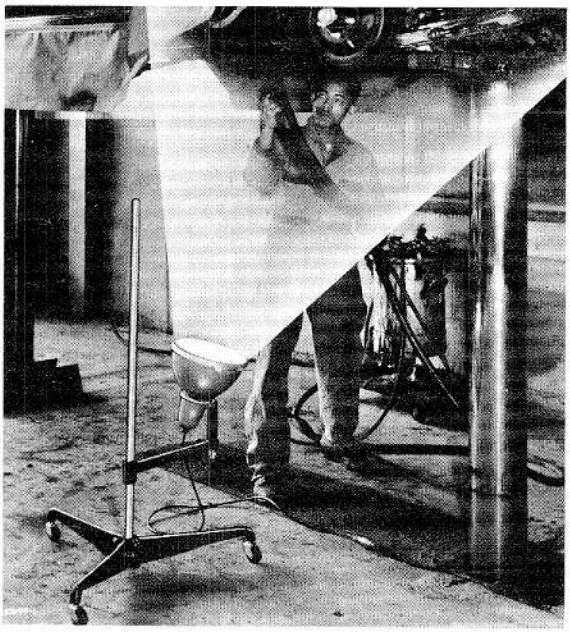
Shade, Cast Aluminum. Accommodates 100 and 150 watt Lamp. Approved 25' Cord. Height of Standard—50". Reach of Standard—46" Radius.
Standard—Cast Iron Tripod Base, hard composition wheels, non-conductive caster, vertical pipe in two 24" sections, with tapered plug for joining. Shipping weight: 35 lbs.



"GARAGE MAN JR." LIGHT FOR INSIDE BODY WORK—ALSO IDEAL FOR FRONT END PITS

C-806 Has cast aluminum shade to accommodate 60 to 100 watt bulb, 25 ft. rubber insulated cord, 7" standard with swivel and stable case iron base.

Special automotive service shop lights like these save fumbling with tangled extension cords. They eliminate groping for a place to hook an old-fashioned trouble light. This specialized light needs to be adjusted only once, for its stable base keeps the light beam directed where it's needed.



UNDERCOATING AND GENERAL UTILITY FLOOD LIGHT

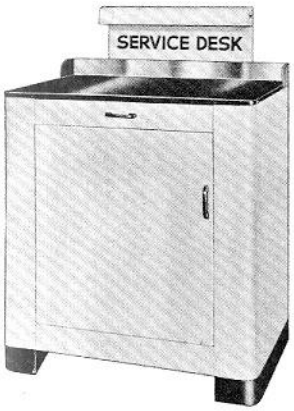
C-838 Mounted on same dependable base as popular C-684 light—has 11" diameter weatherproof reflector to accommodate 200 watt bulb, and is fitted with 25 ft. approved cord.

Eliminates Dangling, Dangerous Drop Lights—Is Easily Cleaned.

Give your undercoating mechanics an extra hand by equipping with this effective light. It will provide an intense flood of light to help your shop turn out more effective and uniform undercoating jobs. It is a safer light for this service because it's totally enclosed. Its plastic lens can be wiped clean in a jiffy.

SHOP "Furniture" THAT IS STURDY—ATTRACTIVE—PRACTICAL—EFFICIENT AND ECONOMICAL

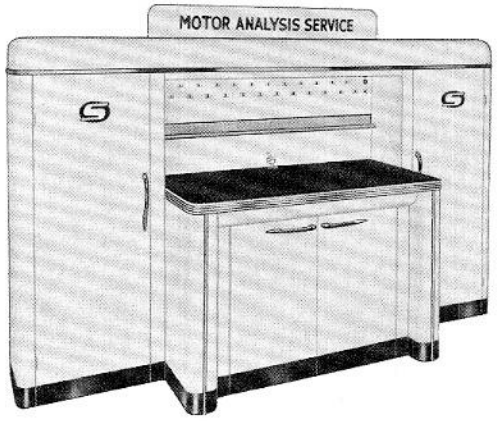
Shop furniture like this will favorably impress your new car buyers and service customers with your shop's efficiency. Such fine equipment not only helps you obtain maximum efficiency from your personnel but generates confidence and good will among all your customers as an extra plus value. All items illustrated on this page are shipped assembled and finished inside and out in baked white enamel with red trim.



SERVICE "WRITE-UP" ALL METAL DESK

9332 Provides 25 cu. ft. storage.

Attractive, efficient-looking, all-steel write-up desk. Large inclined top measures 26" x 38". Full back; smooth operating drawer and huge cabinet for books, tools and testing equipment. Hard baked enamel finish inside and out assures lasting good looks. Over 25 cu. ft. of storage space. Includes fluorescent light and lettering. Factory assembled. Width 38". Depth 26". Over-all height 57½". Desk surface height 44". Shipping weight 240 lbs.



9200 Merchandiser Illustrated

SERVICE MERCHANDISERS (Std. Height)

9200 Model as shown with swing doors.

9250 Same as shown but with sliding doors.

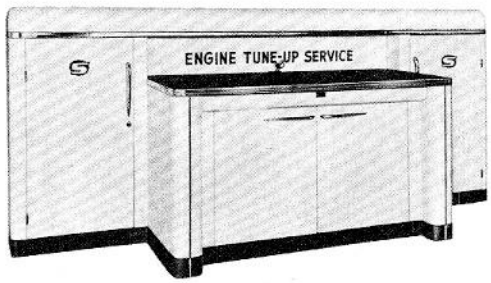
Built of heavy sheet steel over a one-piece welded steel frame. Ample room for all work and storage. Includes parts washer, fluorescent light, air assembly and other handy features. The durable, 1¼" thick, non-conductor, Nat-Flex bench top is oil, grease and water resistant. Height including top banner 68". Length 106". Width 26". Work bench length 54". Work Bench height 33⅝". Shipping weight 525 lbs.

DELUXE WORK BENCH

9100 As shown with swing doors.

9150 Same but with sliding doors.

Rigid all-steel body, 1¼" thick Nat-Flex bench top is oil, grease and water resistant. Doors swing flush with floor; unit includes air assembly and parts washer; many other handy work-saving and step-saving features. Outstanding good looks to match its outstanding strength. 48" over-all height. Bench height 33⅝". Length 60". Depth 26". Shipping weight 325 lbs.



9205 Merchandiser Illustrated

LOW-BOY SERVICE MERCHANDISERS

9205 Model as shown with swing doors.

9255 Same as shown but with sliding doors.

Versatile combination of Work Bench and cabinets, designed for numerous functions. Exclusive 1¼" thick Nat-Flex bench top. Heavy gauge steel construction with one-piece reinforced steel angle superstructure. Merchandiser includes parts washer, fluorescent light, air assembly. Length 112". Height 48". Work Bench length 60". Work Bench height 33⅝". Shipping weight 600 lbs.

9192 BENCH

ECONOMY PRICED "Scotty" SHOP ACCESSORIES

Here are important, time-saving accessories that every shop needs to operate successfully and profitably. Each item is shipped knocked-down to save you assembly and shipping costs. Finished in hard, durable enamel to give your shop an attractive, modern appearance.

"Scotty" MODERN WORK BENCHES

9192 With 1¼" thick Nat-Flex Top.

9191 With heavy steel top.

Economy priced; built for many years of hard usage. Extra heavy construction with reinforced arc welded legs and shelf corners. Exclusive Nat-Flex top is a non-conductor, resistant to oil, grease, water and abrasion. Attractive modern design is smartly finished in two coats of baked enamel in white with red trim. Over-all length 60". Width 24". Height 33⅜". Shipped knocked down. Shipping weight 125 lbs.

"Scotty" PORTABLE CABINET

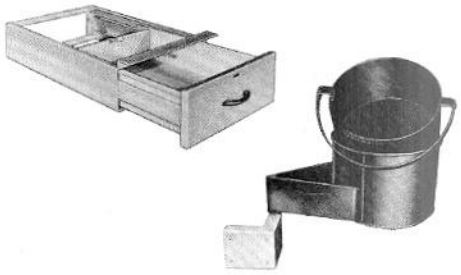
9549 Complete with locking device.

Completely enclosed. For maintenance, inspection, service departments, and repair shops. Bottom compartment has hinged doors with metal pocket for time cards, production records, charts, and parts lists. Top of cart and bottom shelf have 1" retaining lip. Two roomy drawers. Entire unit, inside and out, finished in gray Hammerloid enamel. Height 33⅜". Width 29". Depth 18". Shipping weight 100 lbs.

"Scotty" CART

9540 Complete with rubber tired casters.

Sturdily built, finished in gray Hammerloid enamel. Frame is completely welded unit. Shelves have 1" retaining lip on all four sides, preventing small parts or tools from rolling off. Smooth-acting roomy drawers with lock-eye included. Legs are punched to accommodate one or two additional shelves. Height 33⅜". Width 18". Length 29". Shipping weight 60 lbs.



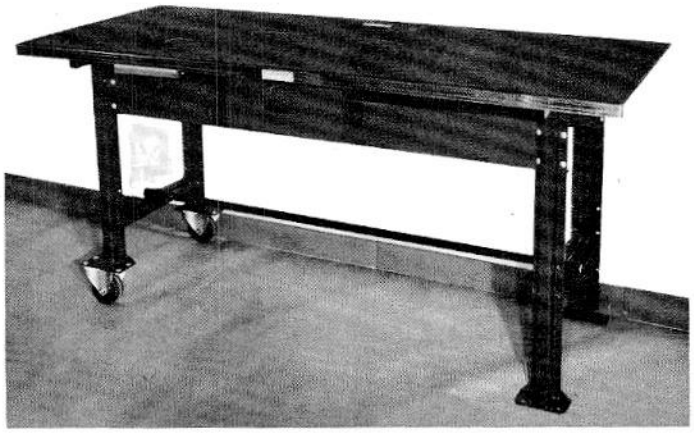
ACCESSORIES FOR "Scotty" BENCHES

9611 PARTS WASHER

Supplied complete with mounting bracket for assembly to 9192 or 9191 "Scotty" benches.

9691 Drawer Assembly

As many as three of these 12½" x 18½" x 4" all welded drawers can be easily installed in either of the "Scotty" benches. Supplied complete with padlock eye.

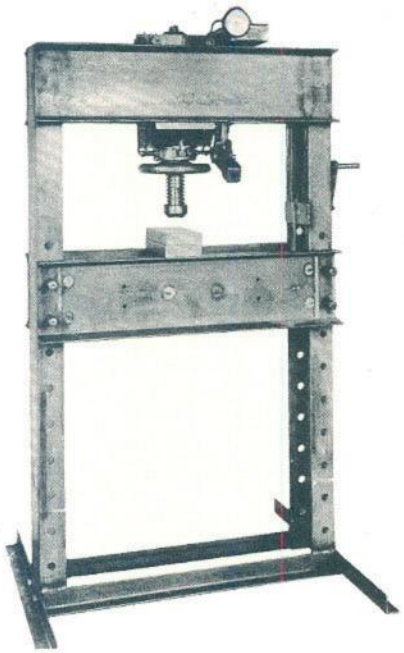


SEMI-PORTABLE BENCH

157 Supplied in green, baked enamel with 34" x 72" x 1¼" Nat-Flex top.

Ideal For Service Clinics

The exclusive Nat-Flex top supplied on this bench and others shown on these pages, is a tough, sound and shock absorbing non-conductor material that will give years of satisfactory service under the most severe shop conditions. The unusual, two caster and two solid leg design is ideal for service clinics, schools, etc. Two handles (not shown) attach to the two solid legs to facilitate movement.



60 TON HYDRAULIC PRESS

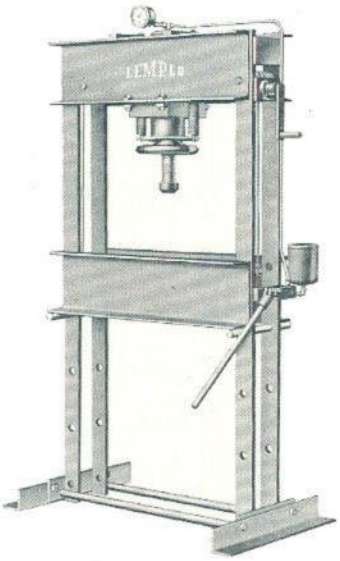
Model 503 All welded, heavy-duty frame construction with adjustable workhead, quick ram screw adjustment hand wheel, 3 speed ram travel and bolster raising mechanism.

General Purpose—Low Cost Model Popular for Automotive Repair Shops

Truck and bus service require the use of a fast, powerful hydraulic press. This rugged, all welded construction frame press features movable head traveling on anti-friction bearings with finger tip push. Three quickly varied pumping speeds, self-locking bolster hoist, and long ram and screw travel are just a few special features of this quality press. With this easy to operate press, years of trouble free service is assured.

SPECIFICATIONS

Pumping speeds (3)		Overall width	51½"
20 tons — 3/16" per stroke		Depth between bolsters	8 3/16"
40 tons — 1/8" per stroke		Max. ram to bolster	41½"
60 tons — 1/16" per stroke		Min. ram to bolster	5½"
Ram travel	6"	Bolster travel	36"
Extension height	6"	Foot rails	36"
Frame height	72"	Bolster channels	10"
Overall height	78"	Side columns	8"
Width between columns	37"	Shipping weight, approx.	900 lbs.



Other Presses Available From 25 to 150 Ton Cap.

50 TON HYDRAULIC PRESS

Model 568 Latest design, complete with bolster raising mechanism, quick ram adjusting hand wheel and ram screw extension.

Economy Model—Ideal for Smaller Shops

This is a new press designed with extra capacity to replace the former 40-ton model. Relocated hydraulic pump handle is more convenient. Heavy-duty pressure gauge in full view of the operator indicates working pressure.

SPECIFICATIONS

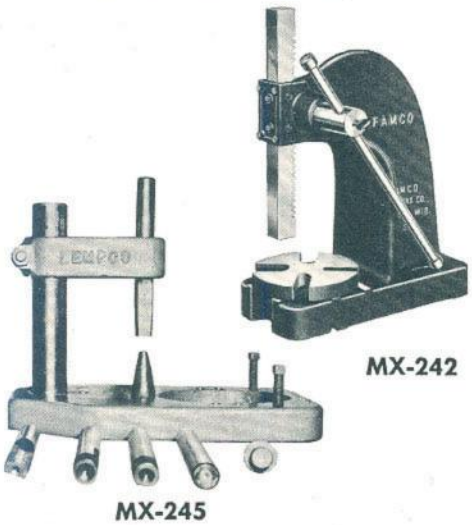
Span between uprights	31"	Minimum daylight	7"
Depth between uprights	5½"	Maximum daylight	43"
Depth between bolsters	7⅛"	Bolster travel	36"
Height of frame	75"	Ram Stroke	7"
Overall height	79¾"	Length of screw extension	6"
Overall width	44⅜"	Weight	800#
Overall depth	36"	Floor space	44⅜" x 36"

RING GEAR RIVETING FIXTURE

MX-245 For all presses.

Can Be Used With Your Present Press.

Upsets rivets cold, the approved way, expands rivets until hole is completely filled, then forms head. Five punches and seven rivet anvils included.



MX-242

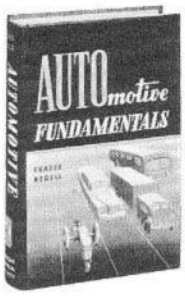
MX-245

BENCH TYPE HAND PRESSES

MX-242-0 ½ Ton Model.
MX-242-2 2 Ton Model.
MX-242-3 3 Ton Model.

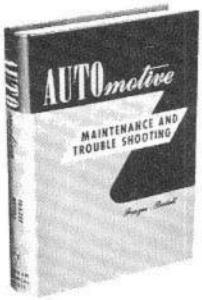
Choice of Three Sizes—½ Ton—2 Ton—3 Ton.

Heavy semi-steel construction equipped with heavy wrought steel pressing block notched for 1⅛", 1⅝", 1⅞" and 2" openings. Handle held in center position by snap ball check.

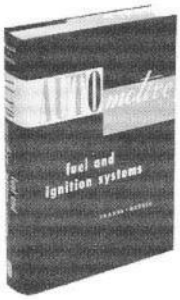


MT-298

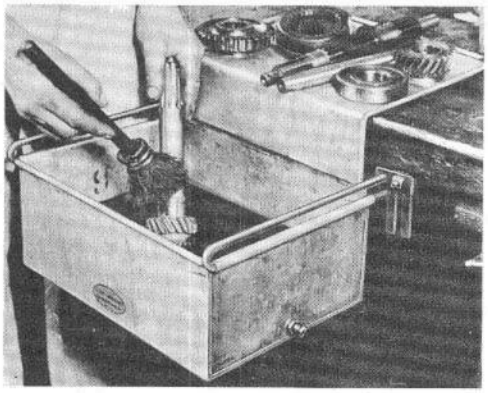
MT-367



MT-373



MT-377



C-3032

AUTOMOTIVE SERVICE TEXT BOOKS

MT-298 Automotive Fundamentals.

538 Pages—423 Illustrations. Contains basic principles complete with background knowledge needed by service salesmen and service managers.

MT-367 Automotive Engines—Maintenance And Repair.

381 Pages—295 Illustrations. Covers service-proven practices of industry in detail—leaves nothing to trial and error. Simplifies procedures that formerly were considered "tricky" even by experienced mechanics.

MT-368 Automotive Suspensions—Steering And Wheel Alignment.

330 Pages—221 Illustrations. An authoritative text of modern practices and procedures for front end alignment and repair mechanics.

MT-372 Automotive Electrical Systems.

436 Pages—350 Illustrations. Gives thorough treatment of fundamentals complete with specific trouble-shooting procedures.

MT-373 Automotive Maintenance And Trouble Shooting.

414 Pages. An ideal source of accurate diagnosis information for gas station men, garage owners, and service salesmen. Has self-index by troubles—no theory but full of what-to-do items for locating and correcting engine, ignition, steering, brake, etc.

MT-377 Automotive Fuel And Ignition Systems.

503 Pages—318 Illustrations. Covers operating principles, maintenance, repair, tests, adjustments and trouble shooting—explained for the novice yet so the veteran mechanic can look up specific answers to peculiar problems.

MT-378 Automotive Collision Work.

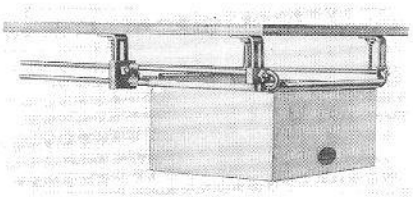
323 Pages—362 Illustrations. Beginners or men with some experience and seeking upgrading instructions will find this book helpful. It describes modern techniques of rebuilding bodies from fundamentals to difficult repair jobs.

You'll Profit TWO Ways When You Give These Authoritative Books As Service Incentive Awards.

When you want to reward your men for some extra special effort or remember a birthday or seasonal wish, give a set of these authoritative, washable cloth bound books. They'll enjoy their modern practical illustrated text and turn out better work as they upgrade their original skills.

UNDER-BENCH TYPE PARTS CLEANER

C-3032 Size 18" x 10½" x 7¾" deep.



Here's a low-cost convenient parts washer that slides away under the work bench when not in use. Adjustable for all types of benches up to 3" thick. Cover folds back over bench acting as a drain. Easily lifted out false bottom traps sludge in bottom of cleaner. Small illustration shows how cleaner easily fastens to under side of bench.

MECHANIC'S TOOL TOTER

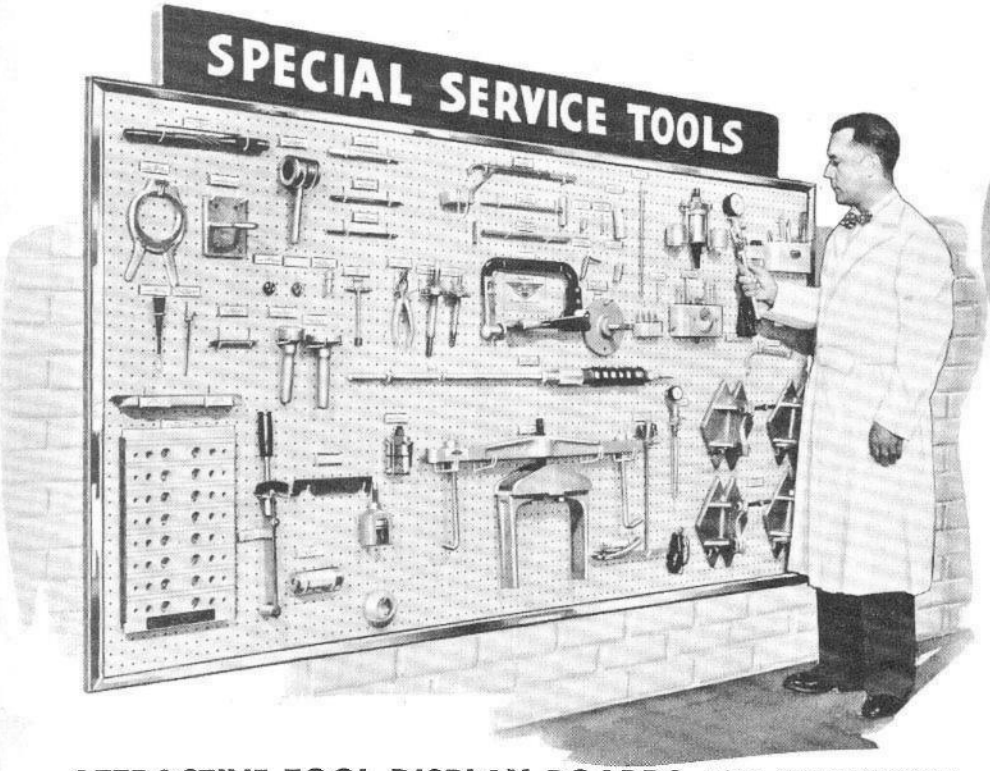
C-848 Size 26½" wide, 17½" deep and 32" high.

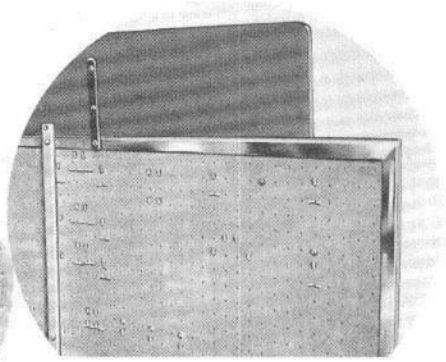
Mechanics are more efficient when equipped with rugged tool toters like these—for they can roll right up to the job with all their tools at their finger tips. There is no more chasing back and forth from a stationary work bench to the job. Toters are made of heavy gauge steel, with reinforced corners and ends, and finished in an attractive neutral gray crackle paint that blends well with most modern color schemes. Shipped individually in fitted cartons. Shipping weight 90 pounds.

Equipped With Locking Steel Door And Free Rolling Saucer Type Casters.

The three partitioned drawers are automatically locked when the compartment cover is locked with the dependable cylinder lock. Two keys are supplied. Special saucer type casters make cabinet easy to roll even when heavily loaded on rough floors.

TOOL DISPLAY BOARDS



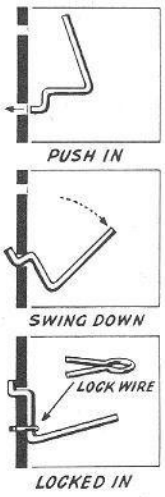


Steel Strut Reinforcements

This close-up shows how each board is reinforced by two steel channel bracing struts which also serve as wall hangers. Note how cotter key type lock wires permanently fasten most tool hanger hooks.

ATTRACTIVE TOOL DISPLAY BOARDS ARE PRACTICAL AND EFFICIENT—HAVE LAMINATED PLASTIC SURFACE

These boards are the practical answer to every shop's need for a flexible method of storing special tools where they can be easily identified by both inexperienced and veteran mechanics. They encourage mechanics to keep tools clean, in good working order, and in a single central location where they can be quickly checked and inventoried. The perforated design allows any desired arrangement with almost unlimited opportunities of adding tools as acquired.



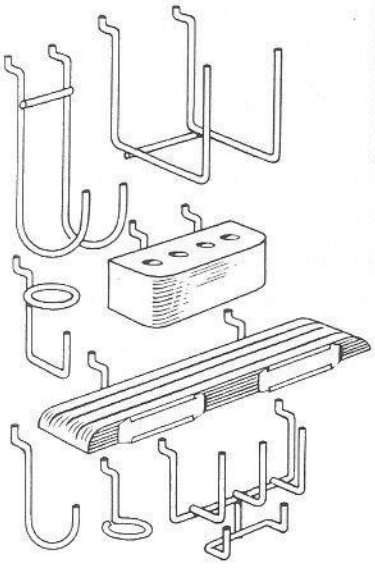
Hooks Lock In Place

Tool hanger hooks slip in punched holes and automatically lock in place. Notice how the weight of the tool is supported by the long, flat shank of the hook pressing directly against the hard, flat surface of the board.

Individual locking wires that look similar to a standard cotter key are supplied for permanently locking most all hooks in position as illustrated.

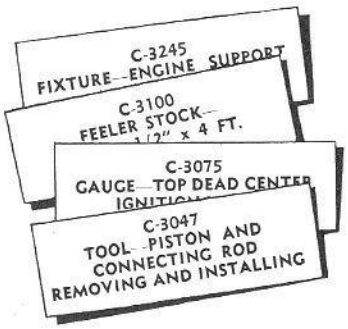
TOOL HANGER HOOKS FOR ALL SPECIAL TOOLS

No nails. No ugly screws to work loose. Each hook safely holds its particular tool.



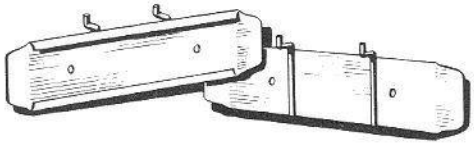
TOOL NAME CARDS

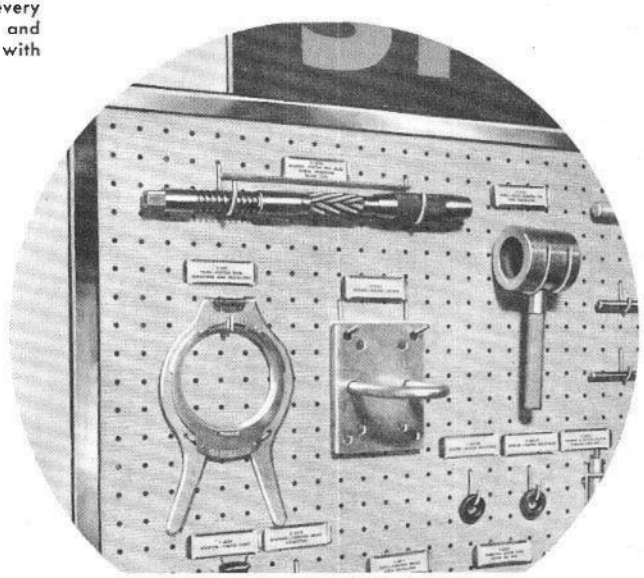
No room for confusion or errors when every tool on board is identified by number and name. Number on card corresponds with number stamped on each tool.



TOOL NAME CARD HOLDERS

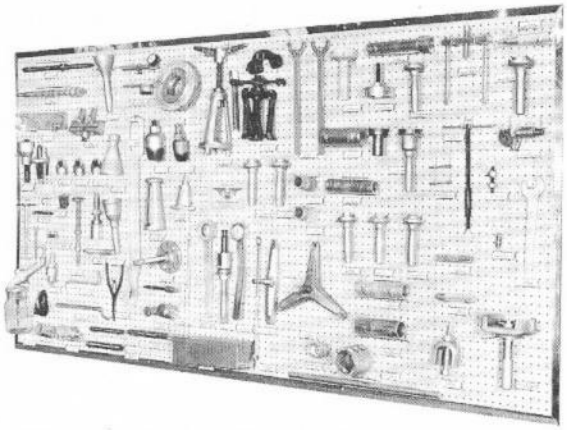
A metal clip is supplied for each tool and hooks onto board. Can be readily removed and shifted as desired.



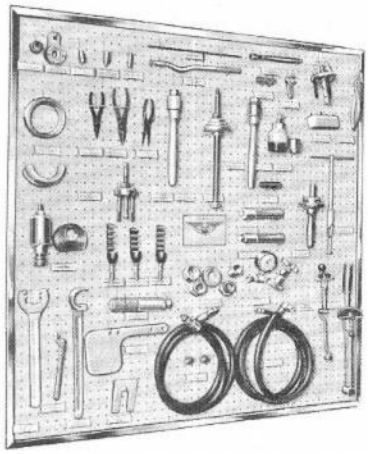


Tools Are Easy To Identify.

Close-up shows how easy it is to find the right tool for the right job. All tools are firmly supported on the board—are easy to remove quickly.

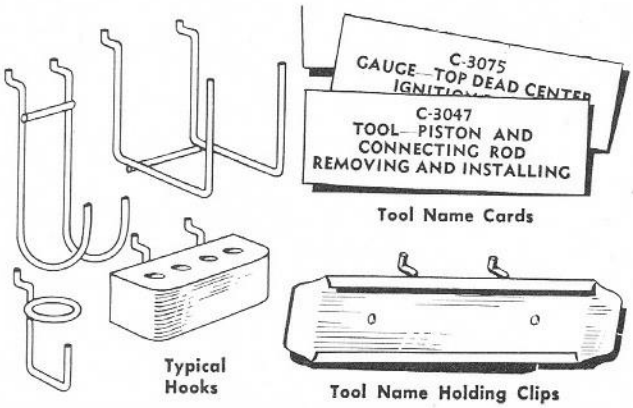


C-3516 Board Size 4' High x 8' Long



These are professional-type boards that blend attractively into the decorative treatment of modern shops.

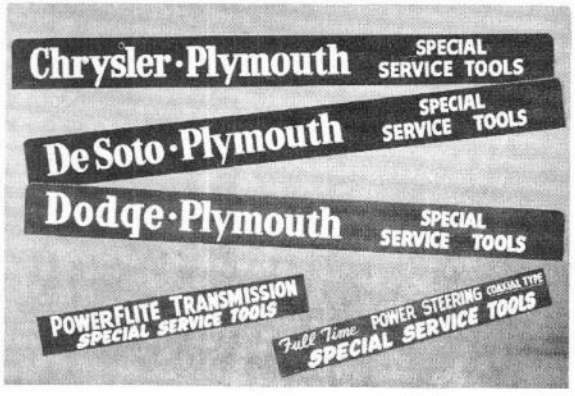
C-3515 Board Size 4' High 4' Long



Tool Name Cards

Typical Hooks

Tool Name Holding Clips


Chrysler·Plymouth SPECIAL SERVICE TOOLS
DeSoto·Plymouth SPECIAL SERVICE TOOLS
Dodge·Plymouth SPECIAL SERVICE TOOLS
POWERFLITE TRANSMISSION SPECIAL SERVICE TOOLS
Full-Time POWER STEERING COAXIAL TYPE SPECIAL SERVICE TOOLS

LARGE 4' x 8' TOOL BOARD

C-3516 3/16" Thick Board only. Complete with polished channel-type aluminum frame and 2 steel reinforcement hanger brackets. Be sure to order hook set and header sign.

Laminated Plastic Surface Is Easy To Keep Clean.

Tough plastic surface has neutral buff, simulated oak grain finish which resists scratches, nicks and general wear—gives boards long life and keeps them looking new and attractive. Boards can be mounted directly to wall, wire or mental type partitions, or supported on most any type of easel.

SMALL 4' x 4' TOOL BOARD

C-3515 3/16" Thick Board only. Complete with polished channel-type aluminum frame and 2 steel reinforcement hanger brackets. Be sure to order hook set and header sign.

Two Sizes Allow Selection To Fit Available Shop Space.

If your shop is departmentalized these smaller boards will usually be just the right size to hold the right selection of tools for each section. They also combine with the larger board to take full advantage of all usable space in tool cribs or parts departments. See suggested space requirements in tool hook set specifications.

HOOK SETS AVAILABLE FOR ESSENTIAL TOOL SETS

C-3517 Set of 372 tool hanger hooks with locking clips, 220 name holding clips, and set of printed Chrysler-Plymouth essential special tool name cards.

Requires 3 large boards or equal area of large and small boards.

C-3518 Set of 370 tool hanger hooks with locking clips, 215 name holding clips, and set of printed Dodge-Plymouth essential special tool name cards.

Requires 3 large boards or equal area of large and small boards.

C-3519 Set of 339 tool hanger hooks with locking clips, 202 name holding clips, and set of printed DeSoto-Plymouth essential special tool name cards.

Requires 3 large boards or equal area of large and small boards.

C-3520* Set of 77 tool hanger hooks with locking clips, 48 name holding clips, and set of printed PowerFlite essential special tool name cards.

Requires one small board.

C-3521* Set of 73 tool hanger hooks with locking clips, 50 name holding clips, and set of printed Coaxial Power Steering essential special tool name cards.

Requires one small board.

* Included in C-3517, C-3518 and C-3519 Sets.

You can save time by ordering these group selections of hook sets, however, any custom hook and clip selection can be ordered in minimum $5.00 groups. Detail hook catalog page available on request. Suggested board area allows extra room for additional tools.

TOOL BOARD HEADER SIGNS

C-3522 Chrysler-Plymouth Special Service Tools. Size 84" x 8".

C-3523 Dodge-Plymouth Special Service Tools. Size 84" x 8".

C-3524 DeSoto-Plymouth Special Service Tools. Size 84" x 8".

C-3525 PowerFlite Transmission Special Service Tools. Size 42" x 6".

C-3526 Full-Time Power Steering Coaxial Type Special Service Tools. Size 42" x 6".

Header signs like these tell your service customers that your shop is especially equipped to service their cars. They also remind your service personnel of your special tool investment that makes their jobs faster and easier.

SALES TERMS

ALL MILLER TOOLS ARE GUARANTEED to be free of defective material and workmanship, and to perform satisfactorily the job for which they were sold. Occasionally, due to limited space or specific vehicle design conditions, a certain tool cannot be unequivocally guaranteed. Such tools are so marked but are designed to maximum practical limits, and will be of valuable help in saving time and effort so as to represent good value for their cost. Any tool failing to meet these requirements will be promptly replaced.

DAMAGED SHIPMENTS ARE THE RESPONSIBILITY OF THE CARRIER: Any visible damage should be noted on the carrier's receipt upon delivery. Claims for concealed damage should be promptly made to the carrier upon discovery. Miller's responsibility ends when the shipment is delivered to the carrier. Miller, however, will gladly cooperate to the fullest extent to assist its consignee obtain prompt and fair adjustment of any loss or damage claim.

MILLER TOOL PRICES ARE NET: They are not marked up to include sales commissions or resale discounts—they are net priced for direct sale from the manufacturer to the car dealer, mechanic, or whoever wishes to buy them. All prices are subject to change without notice. Applicable sales taxes extra. All tools will be invoiced according to the prices prevailing at the time of shipment.

ALL SHIPMENTS ARE F.O.B. ALLIANCE, OHIO: No extra amount is added into the net price to cover prepayment of transportation. This makes Miller tools equally priced to everyone. The close-by dealers do not help pay transportation costs for far-away dealers. *(As this catalog goes to press Miller's shipping facilities are being moved to its new Alliance, Ohio plant. Miller's sales offices will remain in Detroit.)*

5% DISCOUNT FOR CHECK WITH ORDER: This unusually large cash discount can only be earned by sending check or money order with the original order. (It applies to orders for $10.00 or more. Smaller orders are net.) It is granted to save bookkeeping and to guarantee against credit losses. It positively cannot be given on open account or C.O.D. orders. Miller's financial responsibility can be verified through all normal channels, and their financial statement is available to anyone on request.

C.O.D. ORDERS GLADLY SHIPPED: When a check for 25% of the order value is attached to the original order. Cash discount **does not** apply to C.O.D. orders. C.O.D. orders cannot be accepted without 25% deposit.

OPEN ACCOUNT TERMS AVAILABLE: Tools can be shipped open account to dealers with satisfactory established credit ratings. The latest Dunn & Bradstreet records, along with three credit references submitted by the dealer, are used by Miller's Accounting Department to establish their best open account terms of 2%, 10th prox., net 30 days. Miller's Accounting Department is the **only** authority privileged to extend these terms. Open account with MoPar cannot solely be used as a basis for granting these terms. Many dealers who qualify for open account, prefer to send check with order and earn Miller's generous 5% cash discount.

MILLER TOOLS CANNOT BE CHARGED TO MoPar: Being an independent and entirely separate business, Miller Manufacturing Co. is not privileged to charge a dealer's tools to his Chrysler Motor Parts Account.

RETURN OF NEW TOOLS: A customary 10% service and re-stocking charge is made on all tools returned —except where original shipment was made in error by Miller. Written permission is essential on all returned shipments. Such tools must be new and unused, and are accepted subject to final inspection by Miller. A return label will be supplied by Miller with all such approvals—shipments arriving without such a label will be refused and returned to the sender at his expense.

USED TOOLS ARE NOT RETURNABLE: Miller has no market for used tools and consequently cannot accept their return. The best market for such tools from a dealer going out of business is with the incoming new dealer.

MILLER TOOLS ARE AVAILABLE TO ALL: These special tools are designed for only one purpose—to perform important service operations that cannot be safely and efficiently done with any other tool. It is, therefore, to the advantage of every Plymouth, Dodge, DeSoto, or Chrysler owner that whenever his vehicle needs an adjustment or service, that it be effected according to factory recommended service procedures, and with the help of a special tool if the factory service manual shows it as necessary. Therefore, Miller Tools are available to any mechanic, dealer, fleet operator, or service shop desiring them. They should be ordered direct from Miller Manufacturing Co., Detroit 4, Michigan.

See Latest Price List For Current Prices and Complete Listing of All Miller Tools and Service Parts.

All prices subject to change without notice and net F. O. B. Alliance, Ohio, unless otherwise indicated. All tools will be invoiced at prices prevailing at time of shipment.

Miller Tool No.	Unit Price	Catalog Page
D-1	$7.30	30
F-1-A	5.00	94
GD-1	4.95	30
HD-1	75.50	97
HD-1-B	82.20	97
HT-1	161.15	30
MH-1	3.30	30-32
MSL-1	1.35	27
PF-1	105.70	25
PT-1	5.35	30-31
SL-1	2.60	27
EO-2	.80	99
BH-2	2.95	30-32
F-2	6.00	30
FP-2	1.65	30-31
HT-2	63.70	30
LD-2	9.80	97
LD-2-B	10.90	97
MSL-2	1.90	27
PF-2	122.90	25
PT-2	5.55	30
SL-2	3.20	27
WC-2	1.90	30
B-3	7.30	30
F-3	6.60	30-31
FP-3	1.65	30-31
GD-3	4.50	30
HT-3	19.50	30
JWC-3	2.75	30
MSL-3	1.25	27
PF-3	115.90	25
SP-3	.75	30
BH-4	3.15	30-32
BU-4	171.00	28
BW-4	2.15	99
GD-4	5.60	30-31
JWC-4	2.75	30
PF-4	133.10	25
PT-4	3.90	30
SL-4	2.20	27
TD-4	54.25	96
TD-4-B	62.30	96
5⅜ each	.15	99
dozen	1.50	
BH-5	3.70	30-32
FP-5	1.65	30-31
GD-5	4.90	30-31
MSL-5	1.40	27
PT-5	6.45	30-31
WM-5	1.60	30-32
A-6	7.30	30
BH-6	3.45	30-32
E-6	2.75	30-31
GD-6	4.90	30
SL-6	2.40	27
V-6	.55	96
BH-7	3.55	30-32
GD-7	4.80	30-31
MSL-7	.10	27
N-7	12.96	89
PF-7	112.25	25-26
SL-7	.15	27
V-7	.55	96
BH-8	3.80	30-32
E-8	1.90	30-31
GD-8	4.45	30-31
MSL-8	1.65	27
PF-8	42.25	25
PT-8	5.55	30-31
SL-8	2.65	27
V-8	.55	96
VS-8	.65	96
MSL-9	1.60	27
SL-9	3.05	27
V-9	.55	96
H-10	$.90	99
T-10	.65	96
V-10	.55	96
VS-10	.65	96
BH-11	3.30	30-32
N-11-R	12.10	99
PO-11	16.00	95
PO-11-L	17.80	95
PO-11-L-5	10.10	95
V-11	.55	96
BH-12	3.45	30-32
DMP-12	6.10	30
H-12	.90	99
MSL-12	1.90	27
PO-12	22.50	95
PO-12-L	23.85	95
PO-12-L-5	16.15	95
SL-12	3.30	27
T-12	.65	96
V-12	.55	96
VS-12	.65	96
A-14	.75	96-97
BH-14	3.80	30
E-14	.85	99
F-14-S	3.20	31
F-14-7	2.95	31
F-14-8	2.95	30-31
FH-14	5.50	30
H-14	1.00	99
LT-14	.80	96
T-14	.65	96
TS-14	.90	96
TU-14	2.45	96
V-14	.55	96
ZA-14	.65	99
RH-15	6.10	30-32
A-16	.75	96-97
AA-16	17.40	97
AA-16-B	20.40	97
E-16	.85	99
H-16	1.00	99
LT-16	.80	96
SL-16	3.90	27
T-16	.65	96
TS-16	.90	96
TU-16	2.45	96
ZA-16	.65	99
CA-17	410.00	90
A-18	.75	96-97
E-18	.85	99
H-18	1.00	99
LT-18	.80	96
T-18	.65	96
TS-18	1.10	96
TU-18	2.45	96
ZA-18	.65	99
A-19	.75	96-97
T-19	.65	96
A-20	.75	96-97
B-20	1.50	98
E-20	.85	99
LD-20	1.40	97
LT-20	.95	96
MSL-20	2.50	27
N-20	4.75	99
N-20-R	5.25	99
SL-20	4.10	27
T-20	.65	96
TS-20	1.10	96
TU-20	2.45	96
ZA-20	.65	99
MSL-21	1.35	25
A-22	.85	96-97
E-22	.85	99
LD-22	1.40	97
LT-22	$1.00	96
MSL-22	2.05	25
T-22	.75	96
ZA-22	.65	99
A-24	.90	96-97
AA-24	27.75	96
AA-24-B	32.40	96
E-24	.85	99
LT-24	1.10	96
N-24	8.25	99
N-24-R	8.85	99
T-24	.75	96
ZA-24	.65	99
A-25	.95	96-97
T-25	.80	96
A-26	1.00	96-97
E-26	1.05	99
LD-26-T	1.45	97
LT-26	1.20	96
T-26	.80	96
ZA-26	.70	99
T-27	.95	96
A-28	1.00	96-97
E-28	1.05	99
LD-28-T	1.60	97
LT-28	1.35	96
ZA-28	.75	99
A-30	1.10	97
E-30	1.05	99
LD-30	1.70	97
R-30	1.60	97
ZA-30	.75	99
A-32	1.10	97
LD-32	1.80	97
R-32	1.70	97
ZA-32	.90	99
R-34	1.75	97
ZA-34	1.10	99
B-35	2.10	99
MTU-35	6.00	57
MTU-36	6.00	57
R-36	1.75	97
ZA-36	1.15	99
BT-37	10.65	30
BU-37	.90	25
BU-38	3.10	25
C-38	6.00	65
C-38-1	6.00	65
BU-39	1.10	25
SM-39	1.10	25
BU-40	1.10	25
E-40	1.00	98
R-40	2.10	97
SM-40	2.10	25
ZA-40	1.20	99
BU-41	1.15	25
PF-41	129.95	26
SM-41	1.35	25
BU-42	.90	25-27
E-42	1.05	98
PF-42	149.50	26
R-42	2.35	97
SM-42	1.05	25
BU-43	2.00	25
PF-43	148.30	26
SM-43	2.40	25
BU-44	1.10	25
E-44	1.10	98
PF-44	167.10	26
SM-44	1.15	25
BU-45	1.15	25
BU-46	.70	25-27
E-46	1.25	98
N-46	10.20	97
N-46-R	11.30	97

INDEX — By Tool Number

See Latest Price List For Current Prices and Complete Listing of All Miller Tools and Service Parts.

All prices subject to change without notice and net F. O. B. Alliance, Ohio, unless otherwise indicated. All tools will be invoiced at prices prevailing at time of shipment.

Miller Tool No.	Unit Price	Catalog Page
R-46	$2.80	97
BU-47	.70	25-27
N-47	9.50	97
N-47-R	10.60	97
BU-48	1.10	25-27
R-48	3.00	97
SM-49	1.05	25
BU-50	2.00	25-27
SM-50	2.85	25
V-51	13.50	96
V-51-B	14.80	96
BU-52	1.45	25-27
K-52	1.15	99
R-52	3.25	97
SM-52	2.10	25
BU-53	.60	25-27
SM-53	1.35	25
R-54	3.35	97
ZMB-54	6.20	99
BU-55	.75	25-27
SM-55	1.60	25
N-56	7.90	98
N-56-R	8.65	98
BU-58	1.10	25-27
C-58	20.85	92
R-58	3.40	97
SM-58	1.90	25
R-60	3.60	97
PF-61	152.25	26
R-64	3.95	97
N-68	13.75	98
N-68-R	14.90	98
CF-70	3.95	84
BU-75	15.80	25
MX-75	2.00	57
SM-75	15.80	25
79-RL	33.20	74
80-A	19.75	77
80-B	25.00	77
BU-80	9.90	25-26
N-80	4.40	98
N-80-R	4.80	98
SM-80	9.90	25-26
DD-82-2	14.95	75
N-84	3.95	98
N-84-R	4.75	98
BU-90	9.20	26
91-RL	34.25	74
N-92	8.60	98
N-96	8.80	98
N-96-R	9.85	98
BU-98	10.30	25
SM-98	10.30	25
N-99	13.35	98
BU-100	15.00	28
BU-101	1.70	28
BU-104	20.40	28
BU-105	30.80	28
BU-106	36.60	28
109-RL	43.80	74
BU-110	6.45	28
118-RL	43.80	74
C-119	22.50	75
BU-125	17.55	28
PF-126	277.70	28
PF-127	206.60	28
PF-128	169.90	28
T-128	.85	96
PF-129	55.55	28
135	27.75	84
PF-135	18.65	27
PF-137	36.50	27
PF-138	11.20	27
PF-139	21.50	27
PF-151	31.50	27
PF-152	$32.80	27
157	102.75	135
BU-186	5.25	27
BU-187	2.90	27
BU-190	8.85	27
BU-200	44.50	25-26-29
SM-200	48.10	25-26
C-232	13.50	101
BU-238	5.40	26
MX-242-0	25.00	136
F.O.B. Kenosha, Wisc.		
MX-242-2	57.00	136
F.O.B. Kenosha, Wisc.		
MX-242-3	80.00	136
F.O.B. Kenosha, Wisc.		
MX-245	130.70	136
Z-245-B	32.90	99
C-249	6.00	65
C-259	2.95	76
C-260	2.95	76
C-261	2.95	76
C-262	2.95	76
C-263	2.95	76
C-264	2.95	76
C-265	24.00	66
C-266	2.95	76
MT-269	2.10	89
MT-270	75.00	35
MT-271	2.10	89
MT-281	130.00	95
282	345.00	71
MT-282	210.00	95
BU-287	6.05	27
BU-288	2.15	27
MT-289	372.90	90
MT-290	510.00	41
F.O.B. Los Angeles, Calif.		
MT-290-44	1.20	41
MT-290-44-A	2.50	41
C-293-D-2	46.00	14-15
C-293-E-2	38.00	14-15
C-293-F-2	50.00	14-15
C-293-G-2	54.00	14
MT-293	390.00	41
F.O.B. Los Angeles, Calif.		
MT-293-44-B	.80	41
MT-293-44-C	2.00	41
MT-294	435.00	41
F.O.B. Los Angeles, Calif.		
MT-298	5.25	137
BU-300	45.90	29
C-312	3.70	36
E-312	32.95	54
E-313	54.95	54
C-319	13.25	8
C-328	14.40	91
C-328-A	19.50	91
331	58.00	72
C-359	4.75	9
MT-367	4.95	137
MT-368	5.75	137
C-369	16.50	92
MT-372	6.25	137
C-373	10.50	49-52
MT-373	5.95	137
MT-376	94.50	95
MT-377	6.95	137
MT-378	6.95	137
C-379	19.40	92
BU-380	14.70	26
C-385	1.15	69
C-399	33.00	13
400	39.50	84
BU-400	62.75	26-29
C-406-A	4.50	13
DD-406	$11.25	19
C-408	2.60	100
C-410	15.75	101-131
C-412	3.00	49-52
C-413	4.00	11
DD-413	6.20	65
C-416	1.50	36
420-A	1.40	99
422	1.50	99
424	1.50	99
425	1.65	99
DD-425 U.S.	17.75	60
Metric	19.25	
426	1.65	99
428	1.95	99
DD-428	62.90	89-90
DD-431	3.75	100
C-435	29.50	44-54
DD-435	82.50	89-90
DD-437	9.50	18
DD-438	9.50	18
C-452	5.35	19-128-129
C-455	2.55	53
C-466	2.95	76
C-467	2.95	76
C-468	2.95	76
C-469	2.95	76
C-482	2.60	64
C-484	3.45	119-129
C-485	30.45	61-112
C-486	1.95	64
C-496	5.25	19-128-131
C-499	13.95	10
C-499-A	16.50	10
500	49.50	77
BU-500	91.50	26-29
503	785.00	136
MX-509	5.75	49
MX-510	7.75	49
C-518	2.95	76
C-519	2.95	76
C-520	2.95	76
C-521	2.95	76
C-522	4.50	81
C-524	21.75	61-112
C-533	1.00	34
C-536	23.25	83
C-545	6.75	85-86
C-549	26.50	19-22
550	385.00	70-71
C-551	10.75	49-50
552	629.00	70-71
C-552	9.75	131
C-557	9.50	37
C-558	15.00	37
C-562	160.00	41
568	500.00	136
C-578	2.00	118
BU-580	2.25	26
C-584	1.05	78
BU-585	2.25	26
C-585-A	43.75	43
C-585-B	48.00	43
C-585-20	1.10	43
C-589	3.15	85-128-129
597	181.00	70-72
C-600	23.75	92
V-602	.95	96
C-603	7.50	118
T-603	1.20	96
C-604	5.85	118
R-604	3.00	97
A-605	1.60	96
C-605	2.30	118
ZA-605	1.25	99

See Latest Price List For Current Prices and Complete Listing of All Miller Tools and Service Parts.

All prices subject to change without notice and net F. O. B. Alliance, Ohio, unless otherwise indicated. All tools will be invoiced at prices prevailing at time of shipment.

Miller Tool No.	Unit Price	Catalog Page
T-606	$1.50	96
V-606	1.15	96
C-607	4.10	85-86
C-609	5.75	85-88
R-609	3.40	97
A-610	1.95	96
ZA-610	1.55	99
C-612	6.35	102-112
T-612	2.10	96
R-617	4.75	97
T-617	2.95	96
C-625	22.25	87
C-630	2.50	92
C-631	2.50	92
C-637	6.80	10
C-641	22.20	92
C-645	15.75	85-87
C-647	18.75	45
C-650	.25	42
C-665	8.50	85-86
C-671	59.90	92
C-684	24.90	133
C-685	17.50	12-61-112
C-690	9.35	79
C-691	19.00	92
C-692	13.50	85-86
C-693	22.00 net	53
C-697	3.40	92
BU-700	4.95	26
ZA-700	5.70	99
A-704	6.85	96-97
R-704	14.80	97
T-704	5.10	96
BU-705	3.70	26
C-707	23.75	58
C-707-A	11.25	58
C-708	18.75	85-87
C-714	6.10	117
C-716	2.30	118
C-717	5.20	117
R-720	9.00	97
T-720	3.05	96
V-720	2.30	96
ZA-722	3.75	99
BU-725	.85	26-27
BU-726	1.20	26-27
BU-727	1.30	26-27
BU-728	1.50	26-27
BU-729	2.00	26-27
A-730	2.60	96
BU-730	2.60	26-27
C-730	1.45	117
R-730	5.00	97
T-730	1.80	96
V-730	1.20	96
BU-731	1.05	26-27
C-731	4.60	118
C-732	14.75	69
C-736	.60	91
A-740	3.50	96
C-741	4.10	65
C-742	4.10	65
T-742	2.50	96
C-743	4.10	65
C-744	2.85	7-118
ZA-744	1.75	99
C-745	5.50	11
C-748	6.65	8-119-127
C-750	2.00	117
C-756	1.35	65
C-756-B	.55	65
C-757	5.95	11
C-758-D-2	80.75	12
A-760	2.85	96
C-760	$1.70	49-51-109-111-112-127
T-760	2.40	96
ZA-760	2.40	99
C-763	2.65	57-62
C-766	1.65	65
C-766-B	.70	65
C-767	13.25	66
C-768	26.25	66
C-770	23.50	55
C-771	3.50	61
A-775	.45	97
BU-775	4.20	26
R-775	1.00	97
T-775	.40	96
V-775	.30	96
C-776	21.95	47-83
V-780	1.30	96
C-783	3.80	51
C-790	17.35	87
C-801	27.50	78
C-804	11.40	7-83
C-806	10.65	133
DD-807	4.95	9
C-811	3.15	85-128-129
DD-811	3.50	49-52
C-812	5.75	84
C-813	1.15	84
C-816	17.95	91
C-817	45.00	33
C-818	52.50	33
C-819	99.50	33
C-820	.75	33
C-821	.75	33
DD-823	4.00	18
C-824	3.60	43
DD-824	6.60	18
C-826	1.95	37
C-827	3.95	43
C-828	3.25	58
C-829	2.10	89
C-830	2.15	89
C-837-B	53.25	39
C-838	27.95	133
C-839	3.75	11
DD-843	3.75	11
C-844	14.50	8
C-845	17.95	8
C-846	10.30	40
C-848	43.90	137
DD-849	3.00	66
C-852	7.75	102
DD-852	9.85	116
DD-853	4.35	116
DD-854	8.75	116
C-855	1.15	40
DD-855	5.10	9
C-856	83.40	40
C-860	3.75	44-130
DD-860	7.45	9
C-863	29.75	54
C-869	32.35	13-44
C-870	22.25	44-130
DD-872	2.95	76
C-880	24.25	59
DD-882	3.75	49-52
DD-883	3.25	66
C-884	10.75	85-88
C-885	8.25	85-88
C-887	105.75	85
C-889	28.75	63
F.O.B. Muncie, Ind.		
C-890	92.50	85
C-894	2.75	40
C-895	5.25	34
C-896	$6.95	88
C-897	4.50	81
C-898	.60	37
C-899	.60	37
BU-904	2.30	26
BU-905	2.00	26
BU-906	2.00	26
BU-907	1.75	26
BU-909	4.25	26
BU-910	2.30	26
BU-911	7.50	26-27
BU-913	2.00	26
DD-914-C	195.35	14-15
DD-914-K-1	225.25	14-15
DD-915	5.25	66
BU-917	2.00	26
DD-917	9.75	18
BU-919	4.40	26
BU-920	1.50	26
BU-921	1.65	26
DD-921	12.50	17
BU-922	2.25	26
BU-923	3.20	26
DD-926	10.50	18
DD-930	3.95	24
DD-931	3.05	24
DD-932	3.05	24
DD-934	4.60	24
DD-935	5.35	24
DD-936	5.65	24
DD-940	6.60	24
DD-941	5.05	24
DD-942	5.25	24
DD-943	5.60	24
DD-948	24.95	82
DD-949	13.95	10-17
950	5.40	132
DD-950	2.05	22
951	13.75	132
DD-951	6.30	9
952	17.50	132
952-A	18.50	132
952-D	29.50	132
DD-952	7.95	9
953	49.95	132
953-C	149.50	132
953-D	225.00	132
DD-953	6.30	9
DD-954	6.30	9
DD-955	2.20	16
DD-956	3.00	16
DD-957	3.50	16
DD-958	15.25	8
DD-960	8.15	16
DD-961	6.05	16
DD-962	8.15	16
DD-966	57.50	23
DD-967	44.50	22
DD-968	4.95	24
DD-969	12.75	19
DD-970	5.45	9
DD-971	5.20	9
DD-972	5.20	9
DD-974	3.05	24
DD-975	13.75	24
DD-976	12.10	24
DD-980	37.40	18
DD-981	6.90	16
DD-982	6.35	16
DD-983	9.85	16
DD-989	5.50	9
DD-992	1.60	22
DD-993	10.25	8-116
DD-996	2.20	16
DD-997	10.00	16

See Latest Price List For Current Prices and Complete Listing of All Miller Tools and Service Parts.

All prices subject to change without notice and net F. O. B. Alliance, Ohio, unless otherwise indicated. All tools will be invoiced at prices prevailing at time of shipment.

Miller Tool No.	Unit Price	Catalog Page
DD-998	$6.90	16
DD-999	16.55	19
1000½-L	4.95	132
1001	7.95	132
1001-L	8.45	132
DD-1001	8.35	17
1002	15.95	132
1002-L	15.95	132
DD-1002	5.65	16
1003	24.75	132
1003-L	28.75	132
DD-1003	5.65	16
1003½	36.75	132
1003½-L	44.75	132
1004	54.95	132
1004-L	58.95	132
DD-1004	5.65	16
1005	74.75	132
1005-L	84.85	132
DD-1005	4.85	16
1006	129.50	132
1006-L	154.50	132
1011	11.95	132
1011-L	14.95	132
1012	22.50	132
1012-L	22.50	132
E-1012	1.30	97
1013	33.95	132
1013-L	38.25	132
1013½	49.95	132
1013½-L	61.95	132
1014	69.95	132
1014-L	75.95	132
DD-1014	85.75	17-119
1015	99.95	132
1015-L	115.10	132
1016	189.95	132
1016-L	227.45	132
DD-1019	7.65	93
DD-1020	12.95	93
DD-1021	6.85	93
DD-1049	8.75	19
DD-1051	59.50	91
DD-1078	8.75	60
DD-1078-10	1.00	60
DD-1085	7.30	24
DD-1089	147.00	20-21
1090	9.85	85
DD-1090	73.75	20
1091	9.85	85
DD-1091	17.90	20
DD-1092	7.75	20-21
DD-1093	7.75	20-21
DD-1094	12.65	20
DD-1095	5.45	20
DD-1096	5.45	20
DD-1106	12.25	24
DD-1107	11.60	24
DD-1117	13.80	8
DD-1126	3.75	11
DD-1131	111.10	20
DD-1134	20.00	21
DD-1138	46.00	20
DD-1139	7.90	20-21
1140	8.05	20
DD-1140	14.75	20-21
DD-1146	22.10	40
SP-1147	3.35	83
DD-1150	69.50	55-122-129
DD-1152	21.50	114
DD-1153	2.25	21
DD-1155	15.75	93
DD-1156	5.20	24
DD-1159	5.40	40
1160	1.20	98
1161	$1.35	98
1162	1.45	98
DD-1162	6.50	18
1163	1.50	98
DD-1163	25.00	18
1164	1.65	98
1165	1.85	98
1166	2.10	98
1167	2.60	98
DD-1167	125.00	38
DD-1168	95.00	38
DD-1168-A	66.00	38
DD-1169	12.70	38
DD-1170	6.50	58
DD-1175	13.10	17
SP-1182	4.25	64
DD-1202	6.55	130
DD-1203	3.40	130
DD-1204	14.75	130
DD-1205	7.35	130
DD-1206	43.15	130
DD-1207	1.00	130
DD-1208	6.75	130
DD-1209	3.15	130
DD-1211	2.70	130
DD-1213	28.35	130
DD-1214	1.50	130
E-1214	1.00	97
DD-1215	23.15	130
DD-1216	3.35	130
DD-1217	1.80	130
DD-1218	2.50	130
DD-1219	6.75	130
DD-1220	5.95	130
DD-1221	4.30	130
DD-1222	15.65	130
DD-1223	13.50	84-130
DD-1226	51.00	130
DD-1227	4.45	24
DD-1228	37.45	52
DD-1229	9.95	52
1230	7.75	46
DD-1230	13.75	114
E-1416	1.20	97
SP-1434	3.35	83
SP-1435	3.35	83
SP-1436	3.35	83
1450	46.75	77
SP-1454	5.55	69
SP-1527	3.00	49-50
E-1618	1.10	97
SP-1619	3.60	48
SP-1687	4.15	46
SP-1688	2.10	46
SP-1689	1.80	46
SP-1737	4.95	69
SP-1787	2.00	34
E-1820	1.20	97
SP-1846	1.50	34
SP-1917	1.20	124-129
E-1925	1.65	97
E-2022	1.50	97
E-2224	1.65	97
E-2426	1.90	97
SP-2604	4.65	107-111
SP-2623	2.35	101-111
E-2628	2.10	97
SP-2670	2.00	34
SP-2778	2.25	59
2804	1.25	98
2804-L	1.45	98
2805	1.30	98
2805-L	1.60	98
2806-C	1.40	98
2807-A	1.75	98
2808-F	$1.85	98
2809	1.95	98
SP-2819-A	4.50	108
E-2830	2.35	97
SP-2882	2.45	131
SP-2884	4.50	131
2886	1.20	98
2888	1.20	98
2890	1.35	98
2891	1.35	98
2892	1.75	98
2893	1.90	98
2894	2.85	98
2895-C	4.15	98
C-3000	17.90	33
C-3005	27.95	61-112-129
C-3006	25.50	61
C-3012	10.70	75
C-3012-1	2.75	75
C-3014	1.15	36
C-3015	.90	36
C-3020	6.75	78
C-3024	5.25	64
C-3025	.75	65
C-3026	.75	65
C-3027	2.00	80
C-3028	19.75	66
C-3032	16.50	137
E-3032	2.75	97
C-3033	22.30	80
C-3035	9.85	67
C-3036	2.70	34
C-3038	29.60	63
C-3040	54.50	79
C-3041	14.75	56
C-3044	4.75	44
C-3046	2.95	76
C-3049	30.25	74-75
C-3050	3.95	81
C-3051	3.95	81
C-3052	7.25	56
C-3053	11.75	56
C-3054	1.40	62
C-3055	2.95	44
C-3056	12.60	131
C-3057	1.50	68
C-3059	1.05	78
C-3061	2.05	68
C-3065	13.80	62
C-3066	1.00	53
C-3068	8.50	68
C-3075	37.50	54
C-3079	22.00	100
C-3080	6.95	39
C-3086	27.50	121
C-3092	18.50	79
C-3093	15.80	79
C-3095	2.75	16
C-3099	3.80	59
C-3100	1.25	79
C-3101	1.25	79
C-3103	2.95	65
C-3104	2.95	65
C-3105	4.50	119
C-3128	1.50	7-109-112
C-3131	6.75	78
C-3132	33.50	83
C-3133	29.60	63
C-3134	11.95	81
C-3140	20.90	69
C-3144	6.00	34
C-3148	2.25	68
C-3149	27.05	74-75
C-3150	3.25	66
C-3151	4.50	81

See Latest Price List For Current Prices and Complete Listing of All Miller Tools and Service Parts.

All prices subject to change without notice and net F. O. B. Alliance, Ohio, unless otherwise indicated. All tools will be invoiced at prices prevailing at time of shipment.

Miller Tool No.	Unit Price	Catalog Page
C-3152	$4.25	17
C-3159	3.25	66
C-3160	3.00	68
C-3164	5.50	67
C-3167	121.50	63
F.O.B. Muncie, Ind.		
C-3168	28.10	63
F.O.B. Muncie, Ind.		
C-3172	9.70	49-50
C-3173	9.25	49-50
C-3174	67.50	60
C-3178	2.75	46-48
C-3179	3.25	46-48
C-3180	3.25	46-47
C-3181	11.15	45-46
C-3182	9.35	46
C-3183	7.15	46-48
C-3184	6.25	46-48
C-3185	6.75	45-46-110-112
C-3186	11.80	46-47
C-3187	2.80	46-47
C-3192	4.30	46-48
C-3193	3.00	115
C-3194	4.65	115
C-3195	3.75	115
C-3198	1.35	115
C-3200	27.05	74-75
C-3201-A	134.50	121
C-3203-A	257.50	120
C-3204	3.75	116-127
C-3205	4.75	119-127
C-3206	76.55	46
C-3207	1.45	116
C-3208	7.50	49-50
C-3209	29.60	63
C-3211	8.90	108-111
C-3214	9.10	8-110
C-3216	5.25	67
C-3219	4.50	37
C-3221	3.50	61-78
C-3222	229.50	40
F.O.B. Minneapolis, Minn.		
C-3225	3.25	59
C-3228	3.50	110
C-3229	1.50	106-110-111-127
C-3230	2.35	110
C-3231	3.70	80
C-3233	2.20	110
C-3234	1.95	110
C-3236	12.50	59
C-3237	4.50	47
C-3246	27.50	121
C-3248	5.10	36
C-3249	19.75	69
C-3250	1.80	49-51-110
C-3251	9.25	110
C-3263	34.75	69
C-3271	17.95	131
C-3275	4.50	126-129
C-3276	1.35	128-129
C-3277	5.15	124-129
C-3278	4.75	126-129
C-3279-B	1.90	122-129
C-3280	11.25	122-129
C-3281	8.75	10-123-128
C-3282	22.50	123-129
C-3283	1.50	123-129
C-3284	2.40	128-129
C-3285	8.50	126-129
C-3286	6.75	126-129
C-3287	13.75	123-129
C-3288	1.50	123-129
C-3290-A	31.65	110-112
C-3292	4.70	122-129
C-3293	$5.10	122-129
C-3294	7.50	125-129
C-3295	1.25	125-129
C-3296	84.50	57
C-3299	360.00	40
F.O.B. Minneapolis, Minn.		
C-3300	319.00	40
F.O.B. Minneapolis, Minn.		
C-3301	4.25	119-125-129
C-3302	9.50	125-129
C-3303	2.25	47
C-3304	3.75	17-119
C-3309-B	20.95	108-112
C-3313	9.75	131
C-3318	10.10	108-111
C-3319	1.95	103-111
C-3320-A	6.70	104-111
C-3321	5.25	104-111
C-3322	12.55	105-111
C-3323	8.60	103-111
C-3326	6.70	104-111
C-3328	2.25	105-111
C-3329	2.90	104-111
C-3331-A	5.50	105-111
C-3332	12.45	107-111
C-3333	4.50	106-111
C-3335	6.50	125-129
C-3339	22.25	13-47-124
C-3343	155.85	129
C-3344	7.85	107-111
C-3350	16.50	106-111
C-3354	15.75	7
C-3355	2.25	7
C-3356	6.00	7
C-3358	4.25	7
C-3359	1.70	7
C-3360	1.25	7
C-3361	2.35	7
C-3362	1.75	7
C-3363	3.75	7
C-3365	3.95	7
C-3366	2.75	7
C-3367	16.25	7
C-3369	3.25	7
C-3372	59.65	7
C-3379	4.90	109-111
C-3380	38.35	61-122-129
C-3381	48.50	129
C-3386-A	203.25	129
C-3388	3.75	108
C-3389	12.00	84
C-3391	6.75	107-111
C-3392	3.00	103-111
C-3393	2.90	104-111
C-3395	5.50	105-111
C-3396	22.70	100
C-3398	8.25	103
C-3399	1.95	104-111
C-3400	4.40	59
C-3401	2.05	106-111
C-3402	6.35	101-112
C-3408-C	169.45	111
C-3409	64.50	89-90
C-3411	8.65	62
C-3412	6.00	34
C-3413	4.60	101
C-3414	43.75	89
C-3416-B	126.80	7
C-3417	2.95	76
C-3418	2.95	76
C-3419	2.60	56
C-3420	1.20	7
C-3421	1.50	7
C-3422	24.75	64-68
C-3427	3.45	65
C-3428	$7.45	102-111
C-3429	15.50	7
C-3430	3.45	65
C-3433	3.45	65
C-3434	7.85	107-111
C-3435	4.95	107-111
C-3436	2.05	68
C-3437	4.95	107-111
C-3440	14.95	114
C-3442	30.00	53
C-3444	10.50	7
C-3445	1.95	108-111
C-3446	119.00	113
West of Denver	129.00	
C-3447	23.95	113
C-3448	1.95	34
C-3449	6.40	35
C-3450	3.75	109-111
C-3451	4.25	59
C-3452	2.25	105-111
C-3453	179.00	113
West of Denver	189.00	
C-3454	12.00	113
C-3455-A	13.75	113
C-3456	6.20	59
C-3457	24.50	113
C-3460	34.95	94
C-3462	2.85	42
C-3463-A	139.75	111
C-3465	14.95	114
C-3466	8.75	62
C-3467	6.25	59
C-3468	1.95	49
C-3469	6.55	109-111
C-3473	11.40	7
C-3474	11.45	59
C-3475	5.20	53
C-3476	12.10	51
C-3478	3.95	7-83
C-3479	31.50	90
C-3480	45.00	91
C-3481	9.00	90
C-3482	7.45	112
C-3484	2.05	112
C-3486	2.25	112
C-3487	37.50	84-120-128
C-3488	19.00	84
C-3489	49.50	84
C-3491	78.25	76
C-3492	35.80	39
C-3493	53.25	49
C-3494-A	1.75	39-42
C-3495	4.30	76
C-3496	32.95	42
C-3497	62.25	49
C-3499	27.95	52
C-3500	4.75	113
C-3501	13.50	77
C-3501-280	4.40	77
C-3502	35.00	120-121-130
C-3504	359.50	93
F.O.B. Mountain View, Calif.		
C-3505	9.95	58
C-3506	16.85	81-82
C-3508	1.00	42
C-3509	7.50	82
C-3511	7.75	78
C-3512	3.25	42
C-3513	1.65	89
C-3514	16.95	49
C-3515	44.70	139
C-3516	61.95	139
C-3517	49.50	139
C-3518	47.50	139
C-3519	44.95	139

See Latest Price List For Current Prices and Complete Listing of All Miller Tools and Service Parts.

All prices subject to change without notice and net F. O. B. Alliance, Ohio, unless otherwise indicated. All tools will be invoiced at prices prevailing at time of shipment.

Miller Tool No.	Unit Price	Catalog Page
C-3520	$10.95	139
C-3521	10.85	139
C-3522	8.50	139
C-3523	8.50	139
C-3524	8.50	139
C-3525	5.50	139
C-3526	5.50	139
C-3527	14.45	124
C-3528	11.35	125
C-3529	16.75	124-129
C-3531	18.75	124-129
C-3532	2.15	108
C-3533	29.20	125
C-3534	17.95	131
C-3535	8.30	124
C-3550	2.25	40
C-3552	29.95	55
KB-6004	3.25	40
KB-6005	3.25	40
KB-6006	3.25	40
KB-6007	3.25	40
KB-9000	375.00	40
KB-9009	94.50	40
KB-9010	94.50	40
KB-9011	94.50	40
KB-9012	94.50	40
9100	181.65*	134
9150	187.70*	134
9191	71.35*	135
9192	78.60*	135
9200	353.55*	134
9205	397.55*	134
9250	358.60*	134
9255	402.60*	134
9332	114.90*	134
9540	26.60*	135
9549	54.50*	135
9611	7.45*	135
9691	10.00*	135
MTB-80774	63.80	33
13725	35.00	72

*(f.o.b. St. Louis, Mo.)

All Miller tool parts available. Should any part of a Miller tool be lost or broken it can usually be replaced without requiring the owner to buy a complete new tool. Order needed part by S P (standard part) prefix number stamped on tool part. If no number is distinguishable order by tool number and description of part needed.

Special Service Tools Order

Retain Copy For Your Records—Mail Original Direct To

MILLER MANUFACTURING CO. • *5919 Tireman Avenue* • DETROIT 4, MICHIGAN, U.S.A.

FORM F-707

DATE _____ 19 ____ Order No. _____

Charge to _____ Ship to _____

Address _____ Address _____

City _____ Zone _____ State _____ City _____ Zone _____ State _____

C.O.D. _____ Check ATTACHED _____

All Prices Net F.O.B. Alliance Ohio, and subject to change without notice. All tools will be invoiced according to prices prevailing at time of shipment. Michigan and Ohio Sales subject to 3% State Sales Tax.

TERMS

All orders for $10.00 or less are net, and must have check attached. 5% DISCOUNT may be deducted on orders for more than $10.00 when check is attached. C.O.D. orders accepted when check is attached for 25% of net order value—no discount allowed.

THESE TOOLS CANNOT BE CHARGED TO YOUR FACTORY PARTS ACCOUNT

Ship Via _____ Representative _____ (Print Name) Region _____

Unless specified, we will ship Parcel Post, Express or Freight as our judgment indicates.

QUANTITY	TOOL NO.	NAME OF TOOL (USE CATALOG DESCRIPTION)	PRICE	TOTAL
		TOTAL		

Signed _____
Dealer

By _____
Authorized Signature

PLEASE DO NOT WRITE IN SPACES BELOW

Ledg. No.	Class	Terms	Miller Order No.	Zone	Reg.	Dist.	R/V

SPECIAL SERVICE TOOLS

The Important Link in Automotive Service

The right special tool can often be the difference between getting an important customer's car repaired on time, or missing your delivery promise and losing not only a service customer but a new car sales prospect. Special tools also help your shop turn out top quality service work at fair customer prices while earning you a profit. Such Miller tools are low-cost, easy-to-use, portable tools that duplicate original manufacturing and assembly methods. You'll find them recommended by car and truck factory service engineers in official factory service manuals and service time and cost schedules.

All Miller special service tools are available to dealers, independent shops and mechanics on one single net price schedule.

Miller Tools are GUARANTEED

Miller tools are guaranteed to be free of defective material and workmanship, and to perform satisfactorily the job for which they were sold.

MILLER
MANUFACTURING CO.
5919 TIREMAN AVENUE
DETROIT 4, MICHIGAN

Special Service Tools for

CHRYSLER IMPERIAL PLYMOUTH

and Dodge *"Job-Rated"* Trucks

CATALOG C-708

MILLER MANUFACTURING CO.

Designers and Manufacturers of Automotive Special Service Tools

5919 TIREMAN AVE. • DETROIT 4, MICHIGAN

LITHO. IN U.S.A.

SUBSIDIARY COMPANIES

BONNEY FORGE AND TOOL WORKS
ALLENTOWN, PA.

PRECISION MANUFACTURING CO.
WEST BRANCH, MICH.

MONROE STEEL CASTINGS COMPANY
MONROE, MICH.

THE BUCKEYE FORGING COMPANY
CLEVELAND, OHIO